SONY

CAMERA ADAPTOR

YS-W270
YS-W270P

SERVICE MANUAL

1st Edition

⚠警告

このマニュアルは，サービス専用です。
お客様が，このマニュアルに記載された設置や保守，点検，修理などを行うと感電や火災，人身事故につながることがあります。
危険をさけるため，サービストレーニングを受けた技術者のみご使用ください。

⚠WARNING

This manual is intended for qualified service personnel only.
To reduce the risk of electric shock, fire or injury, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so. Refer all servicing to qualified service personnel.

⚠WARNUNG

Die Anleitung ist nur für qualifiziertes Fachpersonal bestimmt.
Alle Wartungsarbeiten dürfen nur von qualifiziertem Fachpersonal ausgeführt werden. Um die Gefahr eines elektrischen Schlages, Feuergefahr und Verletzungen zu vermeiden, sind bei Wartungsarbeiten strikt die Angaben in der Anleitung zu befolgen. Andere als die angegeben Wartungsarbeiten dürfen nur von Personen ausgeführt werden, die eine spezielle Befähigung dazu besitzen.

⚠ AVERTISSEMENT

Ce manual est destiné uniquement aux personnes compétentes en charge de l’entretien. Afin de réduire les risques de décharge électrique, d’incendie ou de blessure n’effectuer que les réparations indiquées dans le mode d’emploi à moins d’être qualifié pour en effectuer d’autres. Pour toute réparation faire appel à une personne compétente uniquement.

Table of Contents

Manual Structure

Purpose of this manual 3
Related manuals 3

1. Operating Instructions

2. Service Information

2-1. Print Board Location 2-1
2-2. Connector 2-1
2-2-1. Matching Connector/Cable 2-1
2-2-2. Signal Input and Output 2-1
2-3. Front Panel Setting 2-2
2-4. Rear Panel Switch Setting 2-2
2-5. Removal and Installation of Cabinet 2-2
2-5-1. Upper Case Assembly 2-2
2-5-2. Front Panel Assembly 2-3
2-5-3. Rear Panel Assembly 2-3
2-5-4. Lower Case Assembly 2-4
2-6. Removal and Installation of Board 2-4
2-6-1. AC-214 Board 2-4
2-6-2. PS-616 Board 2-5
2-6-3. SW-1073 Board 2-5
2-6-4. CN-2213 Board 2-6

3. Circuit Description

3-1. Outline 3-1
3-2. AC-214 Board 3-1
3-3. CN-2213 Board 3-2
3-4. PS-616 Board 3-2
3-5. SW-1073 Board 3-2

4. Electrical Alignment

4-1. Clock Frequency Adjustment 4-1

5. Semiconductor Pin Assignments

6. Spare Parts

6-1. Notes on Repair Parts 6-1
6-2. Exploded Views 6-2
6-3. Electrical Parts List 6-4

7. Overall Block Diagram

Overall 7-1

8. Schematic Diagrams and Board Layouts

Schematic Diagrams
AC-214 8-1
CN-2213 8-2
PS-616 8-3
SW-1073 8-8
Frame 8-9
Board Layouts
AC-214 8-10
CN-2213 8-11
SW-1073 8-11
PS-616 8-13

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Manual Structure

Purpose of this manual

This manual is the service manual of Camera Adaptor YS-W270/W270P.
This manual is intended for use by trained system and service engineers, and describes the information for maintenance and detailed service.

Related manuals

The following manuals are prepared for YS-W270/W270P.

- **Instruction Manual (Supplied with YS-W270/W270P)**
  Part No.: 3-205-448-11
  This manual describes the information required for the actual management and operation of this unit.

- **“Semiconductor Pin Assignments” CD-ROM (Available on request)**
  This “Semiconductor Pin Assignments” CD-ROM allows you to search for semiconductors used in Communication System Solutions Network Company equipment.
  Semiconductors that cannot be searched for on this CD-ROM are listed in the service manual for the corresponding unit. The service manual contains a complete list of all semiconductors and their ID Nos., and thus should be used together with the CD-ROM.
  Part number: 9-968-546-XX

SONY

3-205-448-**11** (1)

Camera Adaptor

Operating Instructions GB

YS-W270/W270P

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Section 1
Operating Instructions

Reprinted from the operating instructions

English

Important Safety Instructions

- Read these instructions.
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- Do not use this apparatus near water.
- Clean only with dry cloth.
- Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- Only use attachments/accessories specified by the manufacturer.
- Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
- Unplug this apparatus during lightning storms or when unused for long periods of time.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Owner's Record
The model and serial numbers are located on the bottom. Record the model number and serial number in the space provided below. Refer to them whenever you call upon your Sony dealer regarding this product.

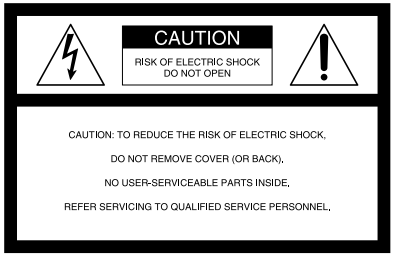
Model No. _____ Serial No. _____

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

THIS APPARATUS MUST BE EARTHED


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK),
NO USER-SERVICEABLE PARTS INSIDE,
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

For customers in the USA (YS-W270 only)
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

The shielded interface cable recommended in this manual must be used with this equipment in order to comply with the limits for a digital device pursuant to Subpart B of Part 15 of FCC Rules.

Table of Contents

Features ..... **6 (GB)**
Precautions ..... **6 (GB)**
Location and Function of Parts and Controls ..... **8 (GB)**
Connections ..... **10 (GB)**
Notes on Connections ..... 10 (GB)
Using One YS-W270/W270P ..... 10 (GB)
Connecting more than one camera adaptor ..... 11 (GB)
Combining a multiplexer ..... 13 (GB)
Specifications ..... **14 (GB)**

Features

The YS-W270/W270P camera adaptor can be connected to a Sony SSC-series camera or the SPT-M320/M320CE video camera (multiplex transmission capability), providing it with power and an external synchronization signal while also transmitting the video signals from the camera to a monitor.
The adaptor has 4 camera input connectors and 8 video output connectors, allowing for connection of up to 4 cameras and 8 monitors.

- Only a single 75-ohm coaxial cable is needed to send synchronization signals, video signals and power.
- The SYNC MODE switch allows you to switch the synchronization mode according to the source signal.
  - In the PRIMARY mode you can output synchronization signals from the YS-W270/W270P.
  - In the SECONDARY mode you can connect more than one YS-W170/W170P or YS-W270/W270P using external synchronization signals. There is no image disturbance when you switch the camera. (For details on connection, see the Connection section.)
- The YS-W270/W270P has a built-in cable compensation circuit that allows you to switch the video signal compensation level according to the cable length.
- The YS-W270/W270P can be used with both VS and VD cameras, which means the adaptor is compatible with all camera models in any series. If you connect the adaptor to a VD camera, you don't need to adjust the H-Phase at the time of installation.
- You can output the video signals to two systems.

Precautions

Power supply

Be sure to operate the camera adaptor according to the power requirements outlined under "Specifications" on page 14 (GB).

Foreign objects

Be careful not to spill liquids, or drop any flammable or metal objects into the body of the unit.

Operating and storage locations

Avoid operating or storing the unit in the following locations.
- Extremely hot or cold places (operating temperature: –10 °C to +50 °C [14 °F to 122 °F])
- In direct sunlight for long periods, or close to heating equipment
- Damp or dusty places
- Where it is exposed to rain
- Locations subject to strong vibration
- Near strong magnetic fields
- Close to generators producing powerful electromagnetic radiation, such as radio or TV transmitters

Care

- Clean the cabinet with a soft, dry cloth. If it is very dirty, use a cloth dampened with a small quantity of neutral detergent, then wipe dry.
- Avoid the use of volatile solvents such as alcohol, benzene, and thinners. They may damage the surface finish, or impair the operation of the unit.

Ventilation

Do not wrap the unit in a cloth, etc., during operation. This may cause the internal temperature to rise excessively and the camera adaptor to malfunction.

Miscellaneous

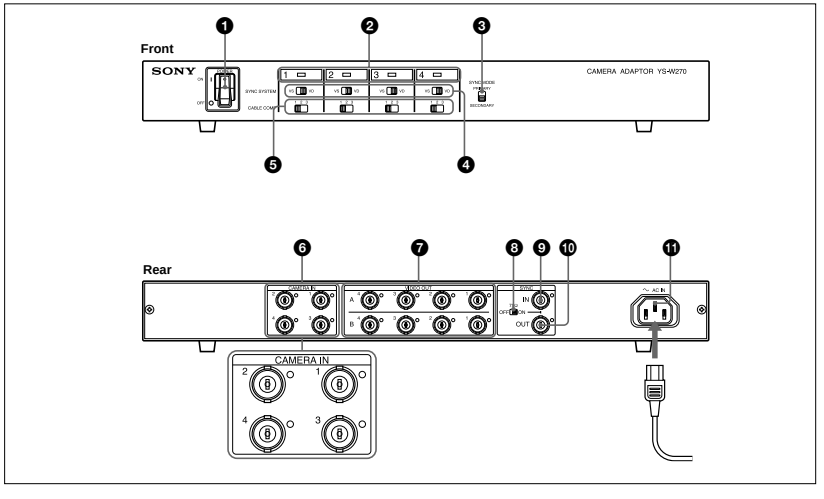
- Be careful not to spill water or other liquids on the unit or allow combustible or metallic objects inside the body. If used with foreign objects inside, the unit is liable to fail or cause a fire or an electric shock.
- If the product is transported or shipped, repack it as originally packed at the factory, or in materials equal in quality.

Rack mounting

The unit can be mounted in an EIA standard 19-inch rack by attaching the rack mounting brackets and screws (supplied).

In the event of any problems with the operation of the camera adaptor, contact your authorized Sony dealer.

Location and Function of Parts and Controls



❶ POWER switch
Switches the power to the unit and the connected cameras on and off.

Notes
- If you connect a camera to this unit after switching the power on, the camera will not operate. Be sure to complete connections before switching the power on.
- If you switch the power off and want to switch it back on, wait five seconds or more before doing so.

❷ LED indicators (1 ~ 4)
Indicate which cameras are connected.

❸ SYNC MODE switch
You can select the mode according to the synchronization signal source.
You can switch the synchronization mode according to the synchronization signals.
PRIMARY: Uses the synchronization signals from the YS-W270/W270P.
SECONDARY: Uses external synchronization signals when you connect multiple camera adaptors, or uses the internal synchronization signals from the camera.

❹ SYNC SYSTEM switches (1 ~ 4)
You can select the mode according to the camera's synchronization method.
VS: Uses a VS method camera (conventional Video Sync method).
VD: Uses a VD method camera.

❺ CABLE COMP (1/2/3) switches (1 ~ 4)
Compensate for signal loss in the cable connection to the camera. Set the switch depending on the cable type and length according to the following table.

When using SSC-series cameras

Switch setting / Cable type	1	2	3
RG-59B/U (3C-2V)	max. 100 m (328 ft.)	max. 200 m (656 ft.)	max. 300 m (984 ft.)
RG-6A/U (5C-2V)	max. 160 m (524 ft.)	max. 330 m (1082 ft.)	max. 500 m (1640 ft.)
RG-11A/U (7C-2V)	max. 200 m (656 ft.)	max. 400 m (1312 ft.)	max. 600 m (1968 ft.)

Caution
The resistance of the cable should be 30 ohms or less.

❻ CAMERA IN connectors (1 ~ 4) (BNC-type)
Connect to the DC IN.VS IN/VIDEO OUT connector of any SSC-series camera or the SPT-M320/M320CE video camera with multiplex transmission capability.

Note
When using a SSC-series camera or the SPT-M320/M320CE video camera, be careful not to connect the CAMERA IN connector on the camera adaptor with the MONITOR OUT connector on the camera; doing so may lead to damage or breakdown of the camera. Always be sure to connect to the VIDEO OUT connector on the camera.

❼ VIDEO OUT A and B connectors (1 ~ 4) (BNC-type)
Connect to the video input connector of a video monitor to output the video signals input from the CAMERA IN connectors (1 ~ 4). The A and B connectors output the same signals.

❽ 75Ω (ON/OFF) switch
Controls the 75-ohm termination of the SYNC IN connector.
- When using the SYNC IN connector only, set this switch to ON.
- When using the SYNC IN and SYNC OUT connectors, set this switch to OFF.

Note
If you are using neither the SYNC IN nor SYNC OUT connector, set the switch to ON.

❾ SYNC IN connector (BNC-type)
You can input external synchronization signals.

Notes
- The SYNC MODE switch ❸ must be set to SECONDARY, otherwise the external synchronization signals input to the SYNC IN connector will not synchronize the camera.
- The SYNC SYSTEM switch ❹ must be correctly set to VS or VD, otherwise the external synchronization signals input to the SYNC IN connector will not synchronize the camera even if the SYNC MODE has been properly set. Make sure the SYNC SYSTEM switch has been properly set to VS or VD.

❿ SYNC OUT connector (BNC-type)
The signals output from the SYNC OUT connector differ depending on the mode (PRIMARY/SECONDARY) selected by the SYNC MODE switch ❸.
PRIMARY: Outputs the synchronization signals from the YS-W270/W270P (compatible with the SYNC SYSTEM switch in CAMERA IN 1 (VD/VS)).
SECONDARY: Outputs the synchronization signals input to the SYNC IN connector.

Note
The external synchronization signals are not output unless the camera adaptor is turned on.

⓫ AC IN connector
Connects to a 100 – 120 V AC outlet (YS-W270) or a 220 – 240 V AC outlet (YS-W270P).

Connections

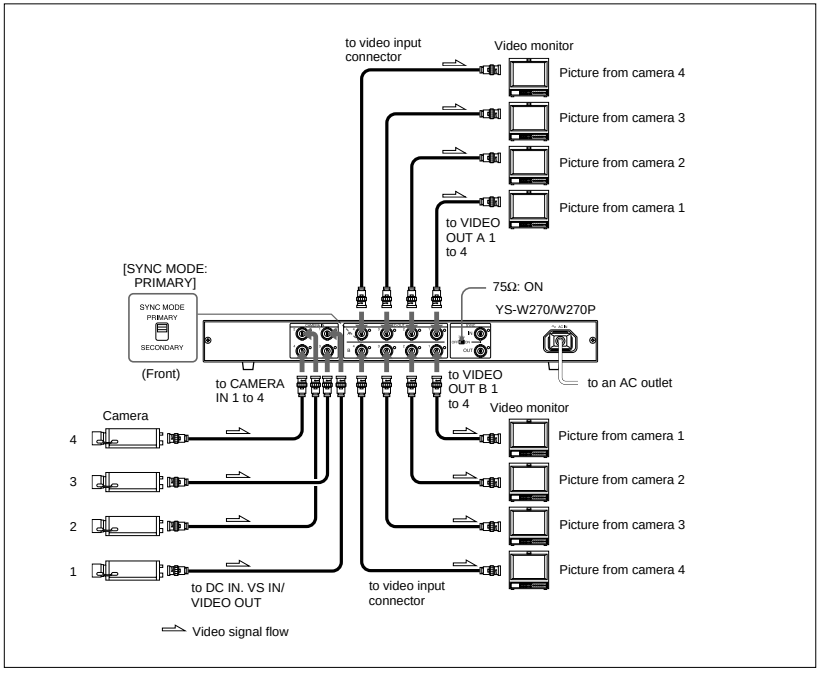
Notes on Connections

- This unit will only operate when connected to a Sony SSC-series camera or the SPT-M320/M320CE video camera with multiplex transmission capability. When making the connections, refer also to the operation manual for the connected video camera module.
- Turn off the power to all the equipment while making the system connections. If you connect a camera to this unit after switching the power on, the camera will not be supplied with power.
- The cables connecting this unit to the video cameras carry the power supply and synchronization signal in addition to the camera video output signal. It is therefore not possible to add a booster or other device between the unit and a camera.
- Always use a 75-ohm coaxial cable of the length specified in the tables on page 8 (GB) when connecting a video camera to this unit; use of an incorrect cable can lead to camera malfunction. Also be sure to set the cable compensation switch correctly.

Using One YS-W270/W270P

Using one YS-W270/W270P you can set up a system of up to four cameras, with two monitors for each camera.

Make all the connections before setting the POWER switch of this unit to ON.



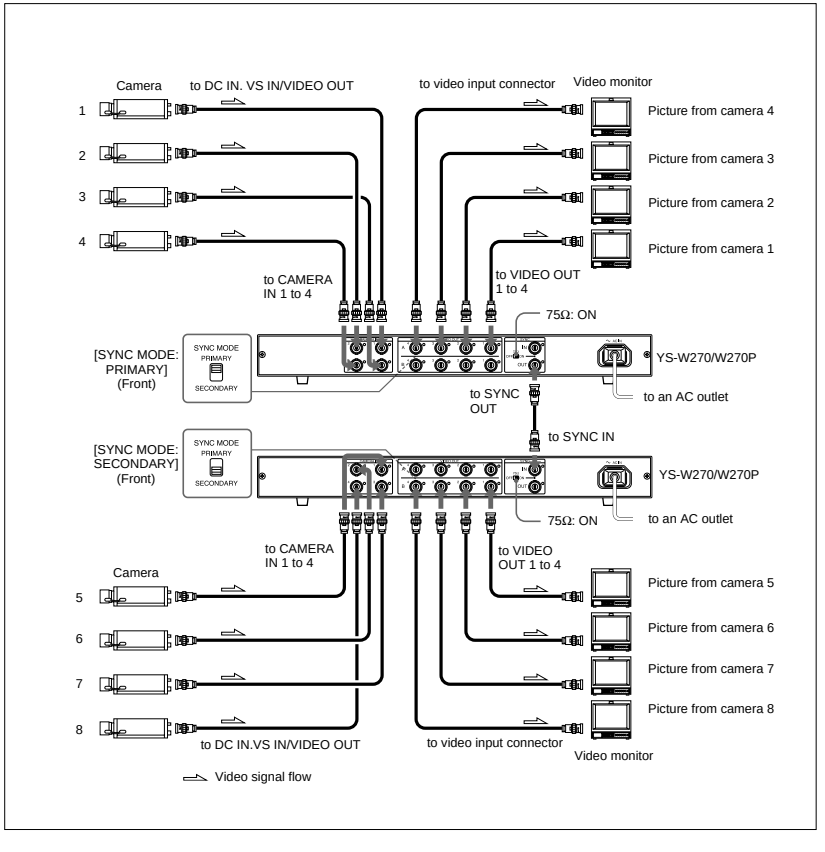
Connecting more than one camera adaptor

Using the synchronization signals from the YS-W270/W270P or external unit allows you to synchronize the cameras connected to second or more camera adaptors.

Note

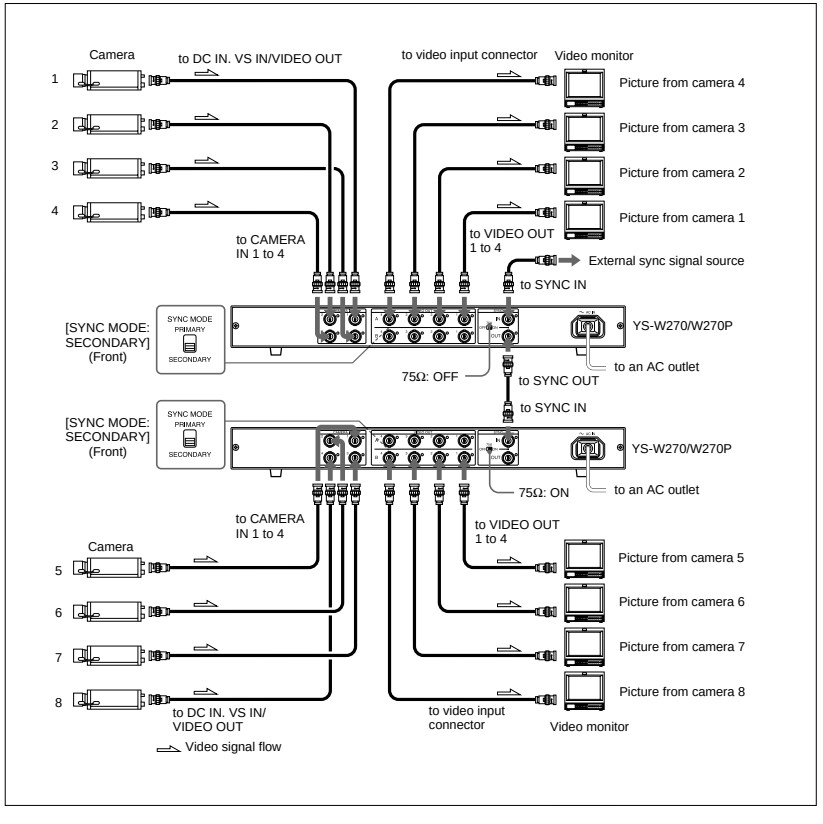
If you use external synchronization signals (SYNC MODE: SECONDARY), you need to set the SYNC SYSTEM switch to VS or VD according to the signals input to the SYNC IN connector, otherwise the camera(s) will not be synchronized.

Connecting two camera adaptors 1: Synchronizing the cameras by the synchronization signals from the YS-W270/W270P

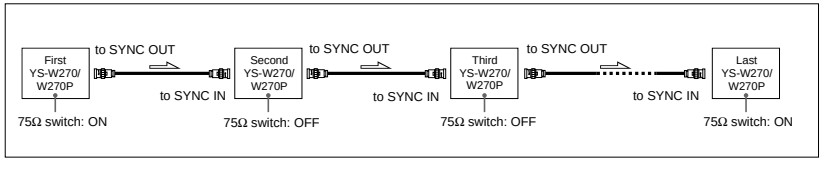


Connections

Connecting two camera adaptors 2: Synchronizing the cameras by external synchronization signals

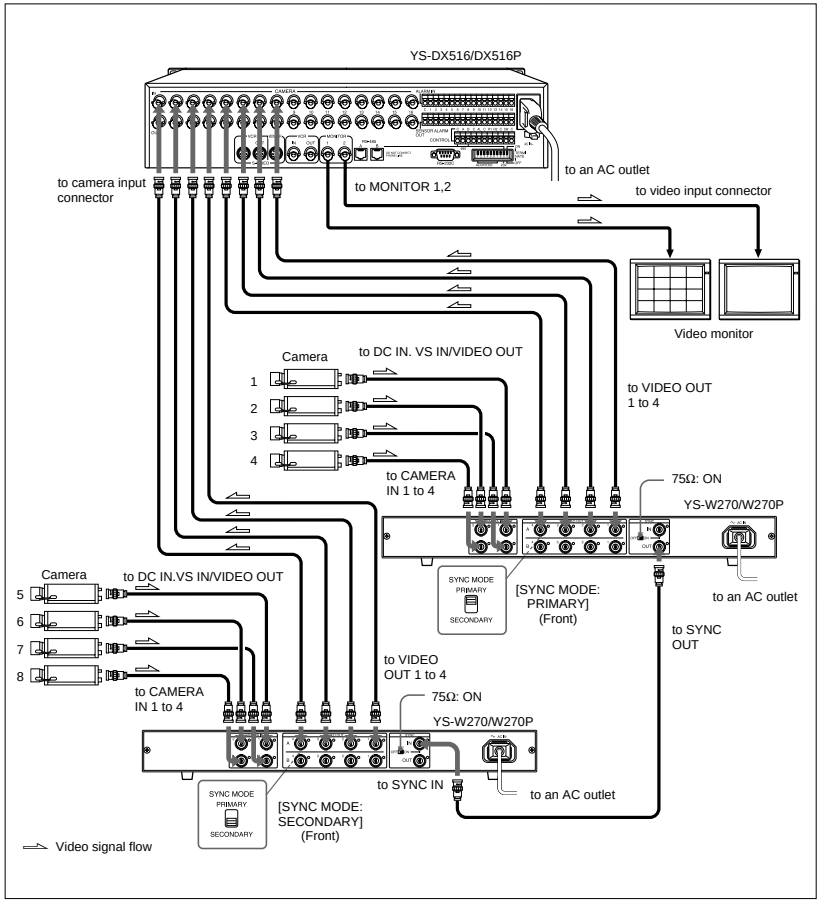


Connection of sync cables and settings of 75Ω switches for three or more camera adaptors



Combining a multiplexer

If you use a Sony multiplexer YS-DX516/DX516P you can display images from multiple cameras; for example, simultaneously in a split screen on one monitor, or sequentially automatically switching the images one by one.



Specifications

Power supply	YS-W270 : 100 to 120 V AC, 50/60 Hz YS-W270P : 220 to 240 V AC, 50/60 Hz
Power consumption	49.5 W
Input connectors	CAMERA IN 1 to 4 (BNC) × 4 Connect only to a Sony SSC series camera or the SPT-M320/M320CE video camera with multiplex transmission capability. SYNC IN (BNC) × 1 Composite sync signal: 4 Vp-p, 75 ohms terminated VS (video/sync): 1 Vp-p, 75 ohms terminated VBS (video/burst/sync): 1 Vp-p, 75 ohms terminated VD (sync): 1 Vp-p, 75 ohms terminated
Output connectors	VIDEO OUT 1 to 4 A, B (BNC) × 8 Composite video signal: 1 Vp-p, 75 ohms terminated SYNC OUT (BNC) × 1 PRIMARY: VD/VS signals output from YS-W270/W270P, synchronized by the SYNC SYSTEM switch in CAMERA IN 1 (VS/VD) SECONDARY: Through output of signals input to the SYNC IN connector
Operating temperature	–10 °C to +50 °C (14 °F to 122 °F)
Dimensions (w/h/d)	424 × 52 × 345 mm (16 3/4 × 2 1/8 × 13 5/8 inches)
Mass	Approx. 3.6 kg (7 lb 15 oz)
Accessories supplied	Operating Instructions (1) AC power cord (1) Rack mounting brackets and screws (EIA standard) (1 set)

Design and specifications are subject to change without notice.

Sony Corporation

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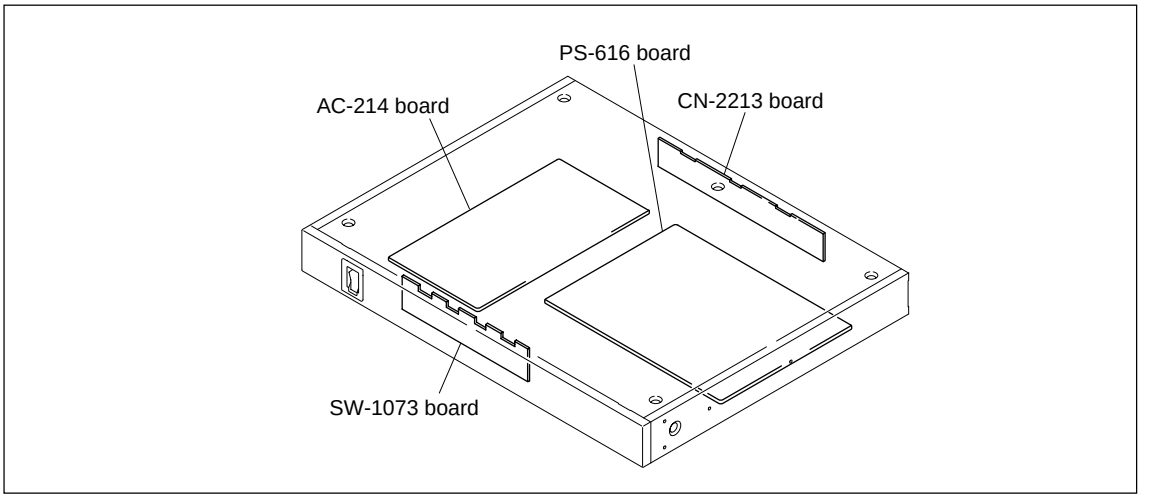
Section 2
Service Information

Note

In section 2, a description is made using the illustration of a UC model.
For the difference between the UC and CE models, refer to “6-2. Exploded Views”.

2-1. Print Board Location



2-2. Connector

2-2-1. Matching Connector/Cable

Connector Function Name	Connector	Matching Connector/Cable Connector	Cable
CAMERA IN	BNC	BNC	Coaxial cable with BNC (75 Ω)
VIDEO OUT A	BNC	BNC	Coaxial cable with BNC (75 Ω)
VIDEO OUT B	BNC	BNC	Coaxial cable with BNC (75 Ω)
SYNC IN	BNC	BNC	Coaxial cable with BNC (75 Ω)
SYNC OUT	BNC	BNC	Coaxial cable with BNC (75 Ω)

2-2-2. Signal Input and Output

Connector	Connector	Input/output voltage	Remarks
CAMERA IN	BNC	OUT : DC29.5 V, Superposed sync signal	
		IN : Video signal 1 V p-p	
VIDEO OUT A	BNC	OUT : Video signal 1 V p-p	At 75 Ω termination
VIDEO OUT B	BNC	OUT : Video signal 1 V p-p	At 75 Ω termination
SYNC IN	BNC	OUT : Sync signal 1 to 4 V p-p	
SYNC OUT	BNC	OUT : Sync signal 0.6 to 1 V p-p	

2-3. Front Panel Setting

1. POWER (ON/OFF)

Turn on the power switch before connecting the camera and monitor TV to the CAMERA IN and VIDEO OUT connectors on the rear panel.

Note

The unit does not start up when the cables are connected after the power switch is turned on.

2. SYNC SYSTEM 1 to 4 (VS/VD)

Select the switch according to the sync signal system of the camera to be connected to each connector.
When the setting is incorrect, the unit does not synchronize the camera.

3. CABLE COMP 1 to 4

When connecting the unit to the camera, select the switch according to the type and length of the coaxial cable to be used in order to compensate for the attenuation of signals. Refer to the table below for the cables.

Cable type	Switch setting 1	2	3
3C-2V	100 m or less	200 m or less	300 m or less
5C-2V	160 m or less	330 m or less	500 m or less
7C-2V	200 m or less	400 m or less	600 m or less

4. SYNC MODE (PRIMARY/SECONDARY)

Select the mode according to the source of signal as the sync signal source of the camera to be connected.

PRIMARY: When a sync signal source from the YS-W270 is used.

SECONDARY: When an outside sync signal source is used with one or more YS-W170/W270 connected.
When an inner sync signal of the camera is used.

2-4. Rear Panel Switch Setting

1. 75 Ω (ON/OFF)

Set the switch to ON when the SYNC IN terminal is terminated at 75 Ω.

Notes

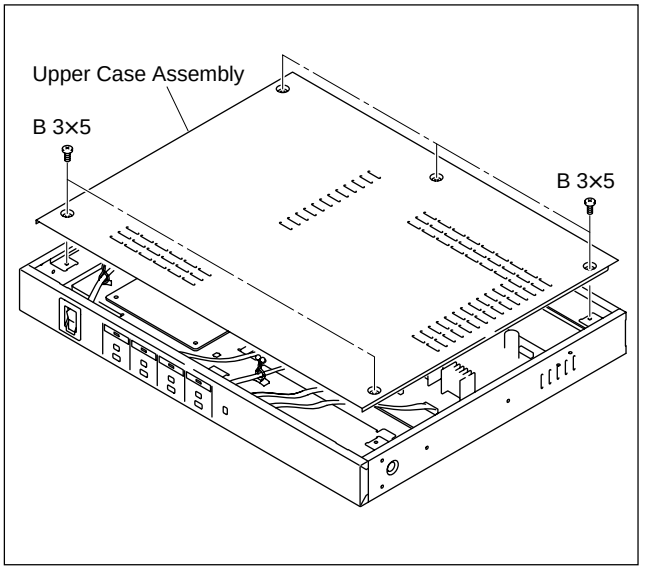
For the following cases, refer to the operation manual "Connection" in Section 1.

- When more than one unit is connected.
- When the SYNC IN terminal is not used.

2-5. Removal and Installation of Cabinet

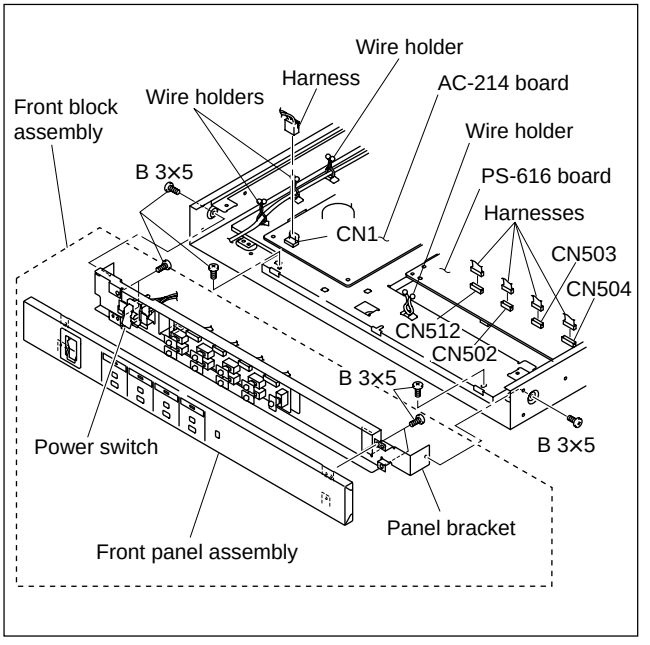
2-5-1. Upper Case Assembly

Remove the five screws, then remove the upper case assembly.



2-5-2. Front Panel Assembly

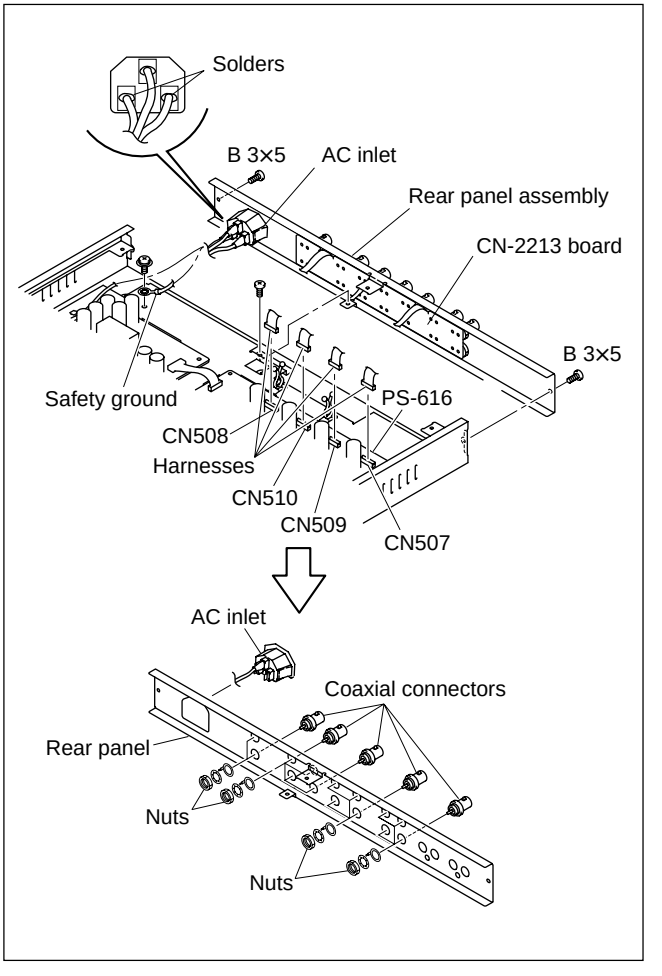
1. Remove the upper case assembly. (Refer to Section 2-5-1.)
2. Remove the four screws, then remove the front block assembly.
3. Detach the two cables from the three wire holders that are positioned in between the power switch and the AC inlet.
4. Disconnect the harness from the connector (CN1) on the AC-214 board.
5. Disconnect the four harnesses from the four connectors (CN502, CN503, CN504 and CN512) on the PS-616 board.
6. Detach the harness from one wiring clip.
7. Remove the four screws securing the front panel assembly, then remove the front panel assembly from the panel bracket.



8. Attach the front panel assembly in the reverse order of steps 1 to 7.

2-5-3. Rear Panel Assembly

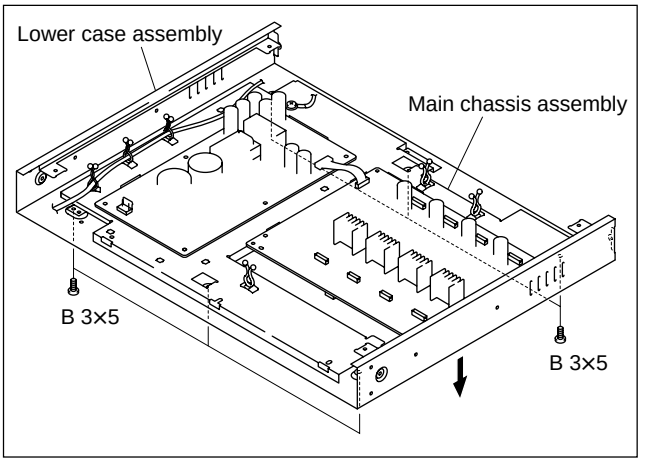
1. Remove the upper case assembly. (Refer to Section 2-5-1.)
2. Remove the front panel assembly. (Refer to Section 2-5-2.)
3. Disconnect the four harnesses from the four connectors (CN507, CN508, CN509 and CN510) on the PS-616 board.
4. Remove one screw (PSW 4 × 8), then remove the safety ground.
5. Remove the three screws (B 3 × 5), then remove the rear panel assembly.
6. Remove the two solders on the AC inlet, then remove the AC inlet.
7. Remove the CN-2213 board. (Refer to Section 2-6-4.)
8. Remove the fourteen nuts, then remove the fourteen coaxial connectors from the rear panel.



9. Attach the rear panel assembly in the reverse order of steps 1 to 8.

2-5-4. Lower Case Assembly

1. Remove the upper case assembly. (Refer to Section 2-5-1.)
2. Remove the front panel assembly. (Refer to Section 2-5-2.)
3. Remove the rear panel assembly. (Refer to Section 2-5-3.)
4. Remove the six screws, then remove the lower case assembly.

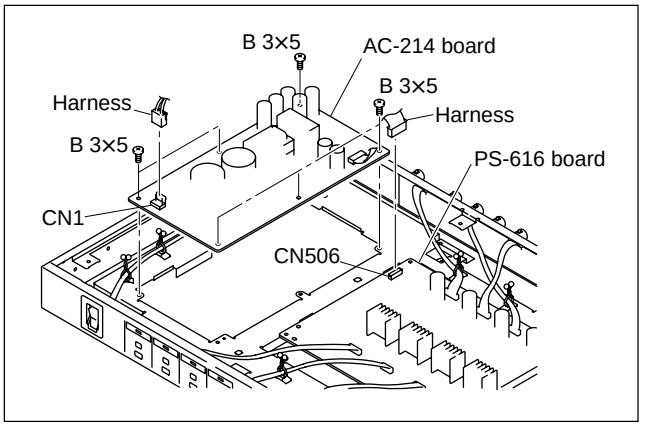


5. Attach the lower case assembly in the reverse order of steps 1 to 4.

2-6. Removal and Installation of Board

2-6-1. AC-214 Board

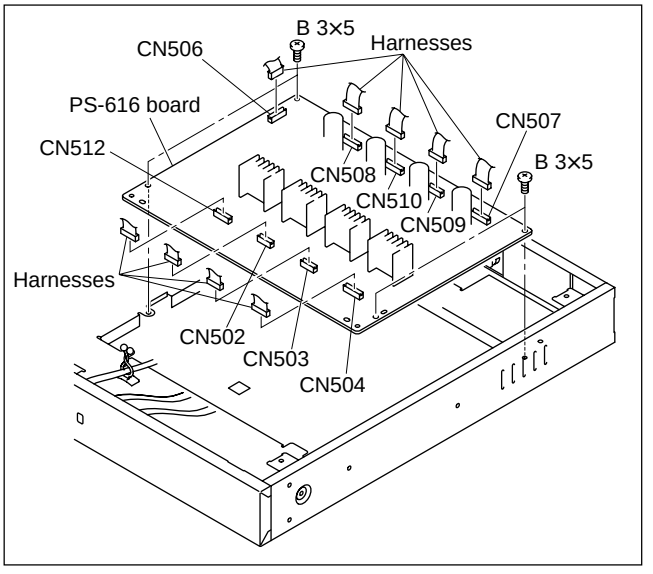
1. Remove the upper case assembly. (Refer to 2-5-1.)
2. Disconnect the two harnesses from the connector (CN506) on the PS-616 board and the connector (CN1) on the AC-214 board.
3. Remove the six screws, then remove the AC-214 board.



4. Attach the AC-214 board in the reverse order of steps 1 to 3.

2-6-2. PS-616 Board

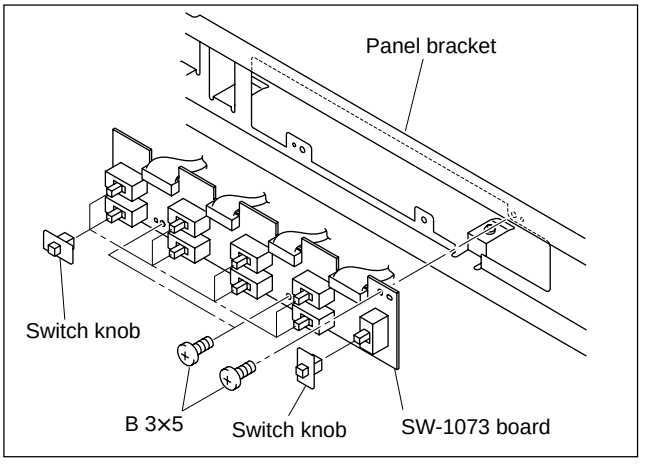
1. Remove the upper case assembly. (Refer to Section 2-5-1.)
2. Disconnect the harnesses from the nine connectors (CN502, CN503, CN504, CN506, CN507, CN508, CN509, CN510 and CN512) on the PS-616 board.
3. Remove the four screws, then remove the PS-616 board.



4. Attach the PS-616 board in the reverse order of steps 1 to 3.

2-6-3. SW-1073 Board

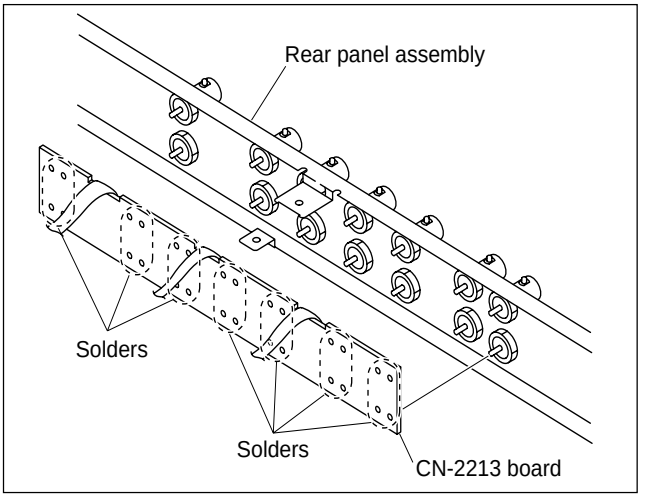
1. Remove the upper case assembly. (Refer to Section 2-5-1.)
2. Remove the front panel assembly. (Refer to Section 2-5-2.)
3. Remove the three screws, then remove the SW-1073 board from the panel bracket.
4. Remove the nine switch knobs .



5. Attach the SW-1073 board in the reverse order of steps 1 to 4.

2-6-4. CN-2213 Board

1. Remove the upper case assembly. (Refer to Section 2-5-1.)
2. Remove the rear panel assembly. (Refer to Section 2-5-3.)
3. Remove the twenty-four solders, then remove the CN-2213 board from the rear panel.



4. Attach the CN-2213 board in the reverse order of steps 1 to 3.

Section 3
Circuit Description

3-1. Outline

The YS-W270 has four camera connection terminals and sends a power supply and sync signal to the camera by connecting one coaxial cable from the BNC connector on the rear panel of each channel to a camera. Moreover, the YS-W270 can output the video signal (from the camera) from the BNC connector on the rear panel to a monitor. The sound around the camera can also be heard by connecting a microphone built-in camera.

3-2. AC-214 Board

This power supply is a switching regulator based on a PWM (pulse width modulation) flayback system. +31 VDC is produced from the commercial power supply, and +9 V and +5 V are produced from +12.0 V using a three-terminal regulator.

1. Line filter block

The line filter consists of a two-stage common mode choke coil so as to take measures for power disturbance. The DC resistance of this choke coil also serves as a rush current limiting resistor.

2. Rectifier circuit on primary winding

After AC is full-wave rectified by D1, it is smoothed by C7 and C8. Moreover, a rush current is limited by the DC resistance of L3. The improvement in a power factor and the suppression of a harmonic current are also performed by inductance.

3. High-voltage switching block

A high-voltage pulse amplitude is obtained when the voltage applied to the No. 1 to No. 3 windings (main winding on the primary winding) of T1 is turned on and off between the drain and source of a semiconductor switch (IC1). IC1 controls the pulse width modulation when the voltage induced to the No. 5 and No. 6 windings (auxiliary winding on the primary winding) of T1 controlled by PH1 is applied to the control terminal of IC1. Since IC1 has an internal overcurrent protection circuit, the internal protection circuit of IC1 is activated during overload and the output is drooped to a constant voltage. D4, R4, and C9 are a snubber circuit. This snubber circuit is a destructive prevention circuit using the high-voltage surge noise of IC1. A high-voltage surge noise is generated due to the leakage inductance of a transformer as soon as IC1 is turned off. The noise is added to a high-voltage pulse and then output. Since IC1 is destroyed when the voltage exceeds the withstand voltage of IC1, the high-voltage surge noise is buffered using a snubber circuit consisting of D4, R4, and C9.

4. +31 V output

After the voltage induced to the No. 11 and No. 12 windings (secondary winding) of T1 is rectified by D8, it is smoothed by C15, C16, and C17 to produce a voltage of +31 V.
R9 and C14 are a snubber circuit. This snubber circuit is a buffer circuit that suppresses the surge noise generated in D8. Since the surge noise generated when D8 is turned on and off is output, it is buffered using a snubber circuit consisting of R9 and C14.

5. +9 V and +5 V outputs

After the voltage induced to the No. 7 and No. 8 windings (secondary winding) of T1 is rectified by D10, it is smoothed by C23 to produce a voltage of +12 V. A voltage of +9 V is produced from the +12 voltage by IC2 (three-terminal regulator). Moreover, a voltage of +5 V is produced from the +9 V voltage by IC3 (three-terminal regulator).

6. Voltage fluctuation detection block on secondary winding

This block monitors an output voltage of +31 V on the secondary winding to improve the precision of an output voltage and feeds the cathode current of IC4 (shunt regulator) back to the primary winding via PH1.

3-3. CN-2213 Board

Input/output connectors and user control switches are mounted on the CN-2213 board.

3-4. PS-616 Board

1. Video signal processing block

After the video signal input from a camera is cut in a DC level by C105, it is terminated by R105 (75 Ω). The sync signal of a camera controller is then canceled using an operational amplifier (IC101). The resultant signal is clamped by Q101 and amplified by IC102. After that, the signal is output through a buffer to the VIDEO OUT A connector.

2. Cable compensator circuit

The gain and frequency characteristics of IC102 are switched to three levels by Q102, Q103, and Q104 when the switch on the front panel is selected according to the length of a cable.

3. 28.5 V REG and protection circuit

A switching power supply of 31 V is produced as a high-impedance and stable output voltage of 28.5 V by Q108 and supplied to the camera together with a sync signal. The current flowing through the camera is converted into a voltage for detection by Q109. During overload and non-load, flip-flop circuits (Q111 and Q112) are controlled using a comparator (IC103), and Q107 is cut off by Q110 so as to stop the power supply to the camera. At that time, the LED slightly lights by flip-flop circuits.
The flip-flop circuits during the power-on sequence are controlled by C134 and Q113.
The operation points during overload and non-load are as follows:
Overload: Approximately 380 mA or more
Non-load: Approximately 50 mA or less

4. Sync block

During PRIMARY setting
The output signal of IC501 is set “high”, the 14.31818 MHz (CE: 14.18750) signal from a crystal oscillator circuit is input to IC504, and a VS/VD signal is output. The VS signal is divided in resistance and sent to IC105 (2/3). The VD signal is passed through a shift register (IC506) to determine the pulse width using a monostable multivibrator (IC507) and sent to IC105 (2/3).
A “high” or “low” signal is output according to the setting of a PRIMARY/SECONDARY selector switch. Moreover, the control terminal of IC105 (1/3) is controlled and a superimposed sync signal is generated. A SYNC OUT signal is output from IC105 (3/3) under the same control.

During SECONDARY setting
The external sync signal input from the SYNC IN terminal is cut in a DC level for sync separation by C513. A VS signal is output from IC508 and branched to two paths. One is sent through a buffer (Q506) to IC104 (3/3). The other is sent to a sync discriminator circuit. A VD signal is output from IC512 and branched to two paths. One is sent through a buffer (Q504) to IC104 (2/3). The other is sent to a sync discriminator circuit. If each input signal of a sync discriminator circuit is normal, the output signal is set “high”. The output signal is input to the gate of AND circuit IC110. The resultant output signal is input to the control terminal of multiplexer IC104 (2/3 and 3/3) to discriminate whether the signal input from the SYNC IN terminal is a VS or VD signal. Moreover, a “high” or “low” signal is output according to the setting of the VS/VD selector switch on the front panel. In this case, the control terminal of IC104 (1/3) is controlled and the VS/VD setting is confirmed. During PRIMARY setting, the same confirmation as above is done by IC105 (2/3). No superimposed sync signal is output if the signal from the SYNC IN terminal differs from the switch setting on the front panel.
A “high” or “low” signal is output according to the setting of a PRIMARY/SECONDARY selector switch. Moreover, the control terminal of IC105 (1/3) is controlled and a superimposed sync signal is generated. A SYNC OUT signal is output from IC105 (3/3) under the same control.

3-5. SW-1073 Board

User control switches and LEDs are mounted on the SW-1073 board.

Section 4
Electrical Alignment

4-1. Clock Frequency Adjustment

Measuring equipment

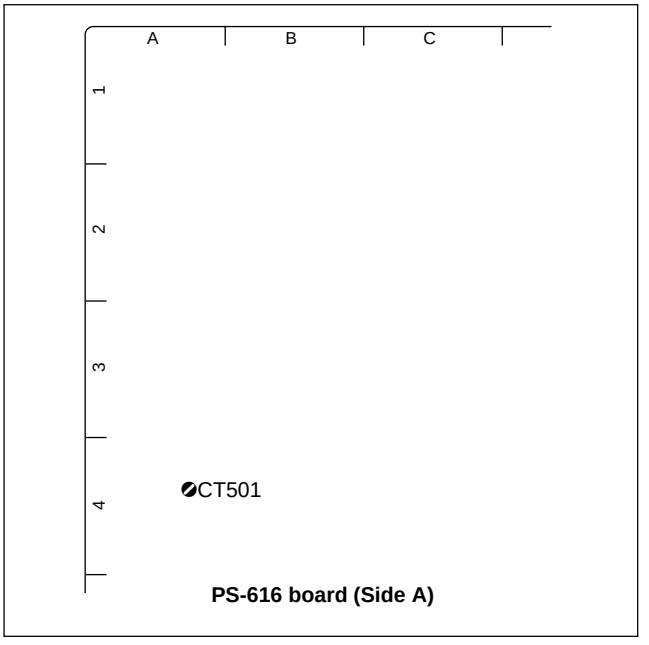
- Frequency counter
- Sony SSC series camera (Superimposed system)

Preparation for Adjustment

1. Set the PRIMARY/SECONDARY switch to PRIMARY.
2. Connect a camera to the CAMERA INPUT connector.

Adjustment

Measuring point: CL501/PS616 (A-3)
(GND: C507 minus terminal)
Adjustment point: ⊘CT501/PS-616 (A-4)
Specification: 14.31818 ±0.00002 MHz (UC model)
14.18750 ±0.00002 MHz (CE model)



PS-616 board (Side A)

http://getMANUAL.com

Section 5
Semiconductor Pin Assignments

The following describes the semiconductor types used in this unit.
For semiconductors marked with page numbers in the index, refer to the corresponding pages in this section. However, in some cases incompatible types are also listed, therefore, when a part is to be replaced, also refer to the Spare Parts section.
In addition, for semiconductors with ID Nos., refer to the separate CD-ROM titled “Semiconductor Pin Assignments” (Sony Part No. 9-968-546-xx) that allows searching for parts by semiconductor type or ID No.
The semiconductors in the manual or on the CD-ROM are listed by equivalent types. Thus the external view or the index mark indication may differ from the actual type.
Pin assignments and block diagrams are based on the IC manufacturer’s data book.

本機に使用されている半導体型名の一覧を下記に示します。索引中，ページが記載されている半導体は，本章の該当ページを参照してください。ただし，互換性のない型名を併記している場合がありますので，部品を交換するときは，Spare Partsの章を参照してください。
また，ID番号が記載されている半導体は，別途発行の “Semiconductor Pin Assignments” CD-ROM版 (ソニー部品番号：9-968-546-xx)を参照してください。
半導体型名またはID番号から検索ができます。
マニュアルまたはCD-ROMに掲載されている半導体は，それぞれの機能を等価的に表わしたものです。
外観やインデックスマークの表示方法が実物と異なる場合があります。
ピン配置およびブロック図はICメーカーのデータブックに従いました。

DIODE — **Page or ID No.**

1SS184 ..... DC001-03
1SS193 ..... DC001-06
1SS193-TE85L DC001-06

LN4SB60 ..... DR009-01
LN4SB60-F DR009-01

MA151WK-TX DC001-03

RD39M-B DC001-04
RD39M-T1B DC001-04
RD5.6M-B2 ..... DC001-04
RD5.6M-T1B DC001-04
RD8.2SB1-T1 ..... DC008-04
RG1C DA001-01
RG4C DA001-01

SFPB-69V DC007-01

LED — **Page or ID No.**

TLG218P LR023-01

TRANSISTOR — **Page or ID No.**

2SA1162G TC001-01
2SA1220A-P TM006-01
2SA1220A-Q TM006-01
2SA1586-YG TC001-01
2SA1586YG-TE85L TC001-01
2SA812-T1M6 ..... TC001-01
2SC1623-L5L6 ..... TC001-02
2SC1623-T1L6 ..... TC001-02

DTC114EKA-T146 ..... TC001-03

IC — **Page or ID No.**

CXA1619BM 5-2
CXD1159Q CXD1159Q
CXD1159Q-TH CXD1159Q

MC74HC4053F MC74HC4053F

NJM2230M NJM2230M
NJM2230M(TE2) NJM2230M
NJM431U-TE1 ..... NJM431U
NJM78M05FA NJM78M05FA
NJM78M09FA NJM78M05FA

TC74HC164AF(EL) TC74HC164P
TC74HC4053AF(EL) MC74HC4053F
TC74HC4538AF MC74HC4538N
TC74HC4538AF(EL) MC74HC4538N
TC7S08F TC7S08F
TC7S08F(TE85R) TC7S08F
TC7S14F TC7S14FU
TC7S14F(TE85R) TC7S14FU
TC7SU04F(TE85R) TC7S04F
TK15420MTL LT1253CS8

UPC393G2 ..... UA393DC
UPC393G2-E2 ..... UA393DC

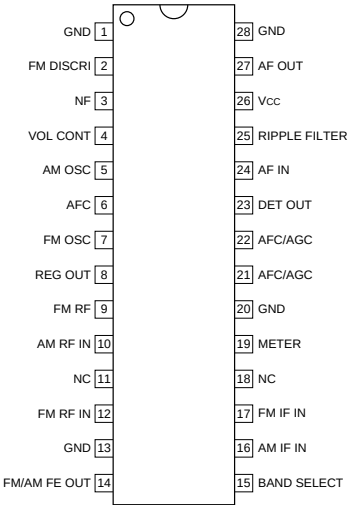
OTHER — **Page or ID No.**

PC123Y22 ..... MA006-01

IC

CXA1619BM (SONY)

FM/AM RADIO
—TOP VIEW—



INPUTS

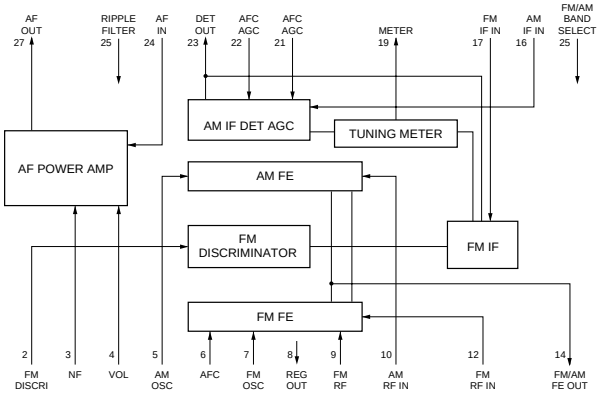
AF IN	:	POWER AMPLIFIER
AFC	:	AUTOMATIC FREQUENCY CONTROL
AFC/AGC	:	AUTOMATIC GAIN AND FREQUENCY CONTROL
AM IF IN	:	AM IF INPUT STAGE
AM OSC	:	AM LOCAL OSCILLATOR
AM RF IN	:	AM RF AMPLIFIER
BAND SELECT	:	BAND SELECT FOR FM/AM
FM DISCRI	:	FM DISCRIMINATOR
FM IF IN	:	FM IF AMPLIFIER
FM OSC	:	FM LOCAL OSCILLATOR
FM RF	:	ALIGNMENT COIL CONNECT FOR FM RF
FM RF IN	:	FM RF AMPLIFIER
NF	:	NEGATIVE FEEDBACK
RIPPLE FILTER	:	RIPPLE FILTER

OUTPUTS

AF OUT	:	POWER AMPLIFIER
DET OUT	:	DETECTOR
FM/AM FE OUT	:	AM AND FM FRONT-END
METER	:	METER DRIVER
REG OUT	:	REGULATOR VOLTAGE
VOL CONT	:	VOLTAGE CONTROL

OTHER

NC	:	NO CONNECTION



Section 6
Spare Parts

6-1. Notes on Repair Parts

1. Safety Related Components Warning

WARNING

Components marked ⚠ are critical to safe operation. Therefore, specified parts should be used in the case of replacement.

2. Standardization of Parts

Some repair parts supplied by Sony differ from those used for the unit. These are because of parts commonality and improvement.
Parts list has the present standardized repair parts.

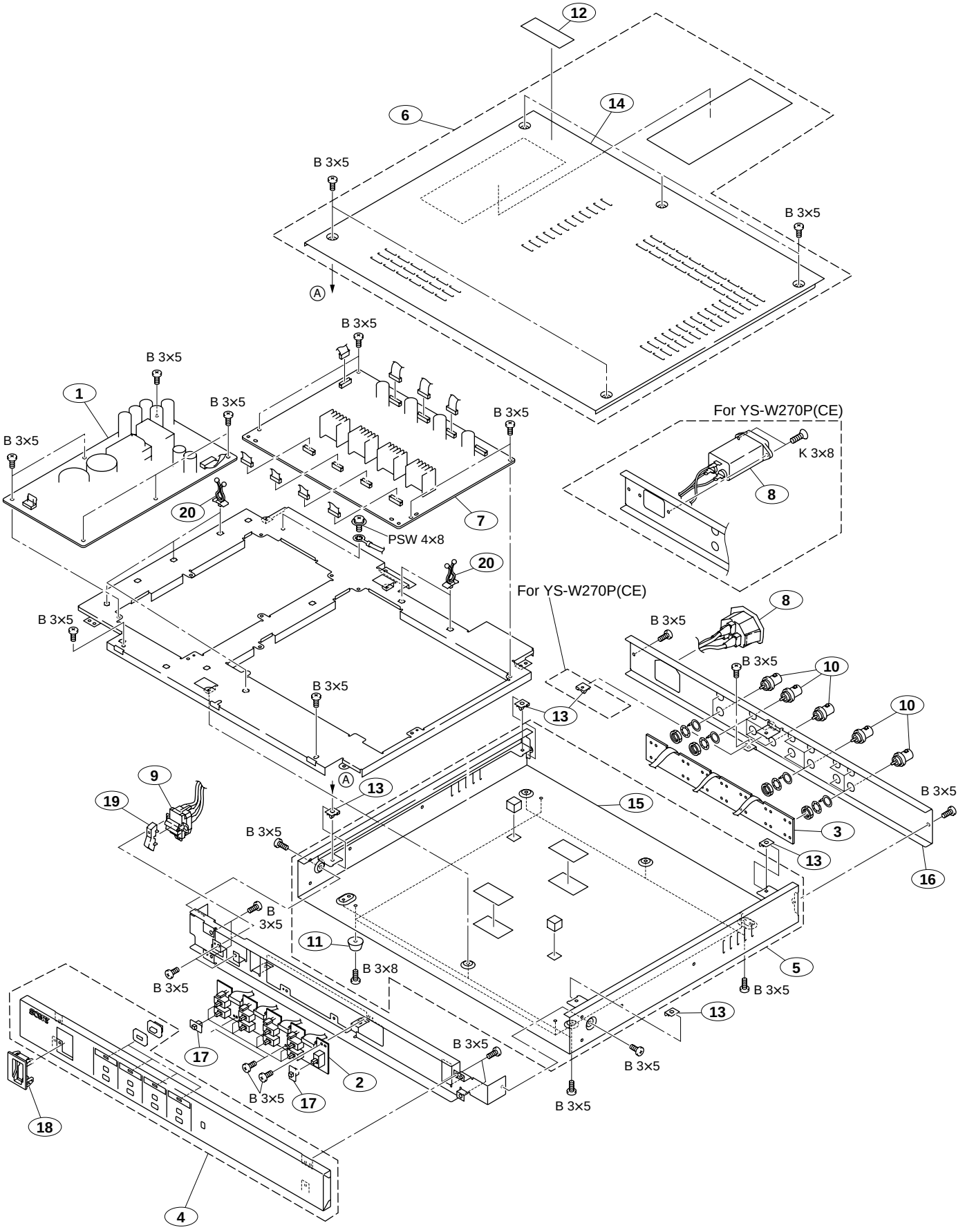
3. Stock of Parts

Parts marked with “o” at SP (Supply Code) column of the spare parts list may not be stocked. Therefore, the delivery date will be delayed.

4. Harness

Harnesses with no part number are not registered as spare parts.
In need of repair, get components shown in the list and repair using them.

6-2. Exploded Views



No.	Part No.	SP	Description	
1	A-8327-990-A	s	MOUNTED CIRCUIT BOARD, AC-214N1	[For YS-W270 (UC)]
	A-8328-002-A	s	MOUNTED CIRCUIT BOARD, AC-214P1	[For YS-W270P (CE)]
2	A-8327-992-A	s	MOUNTED CIRCUIT BOARD, SW-1073	
3	A-8327-993-A	s	MOUNTED CIRCUIT BOARD, CN-2213	
4	A-8327-997-A	o	PANEL ASSY, FRONT	
5	A-8328-000-A	s	CASE ASSY, LOWER	
6	A-8328-001-A	s	CASE ASSY, UPPER	
7	A-8328-007-A	s	MOUNTED CIRCUIT BOARD, PS-616P1	[For YS-W270P (CE)]
	A-8328-074-A	s	MOUNTED CIRCUIT BOARD, PS-616N2	[For YS-W270 (UC)]
8	⚠ 1-251-381-11	s	INLET, AC 3P	[For YS-W270P (CE)]
	⚠ 1-526-954-11	s	INLET,AC	[For YS-W270 (UC)]
9	⚠ 1-762-954-11	s	SWITCH, POWER	
10	1-793-002-21	s	CONNECTOR, COAXIAL (BNC TYPE)	
11	2-092-326-01	s	FOOT, RUBBER	
12	3-179-847-01	o	LABEL(NORTHERN EUROPE),CAUTION	[For YS-W270P (CE)]
13	3-189-523-01	o	SPRING, PLATE	
14	3-602-520-01	o	LID,UPPER	
15	3-602-521-03	o	LID,LOWER	
16	3-631-887-01	o	PANEL,REAR	[For YS-W270 (UC)]
	3-631-887-11	o	PANEL,REAR	[For YS-W270P (CE)]
17	3-681-054-11	s	GUARD, POWER SWITCH	
18	3-688-814-31	s	CAP, SWITCH	
19	3-701-748-00	s	HOLDER, WIRE	
	7-682-248-09	o	SCREW +K 3X8	[For YS-W270P (CE)]
	7-682-546-04	s	SCREW +B3X5	
	7-682-548-09	s	SCREW +B 3X8	
	7-682-961-01	s	SCREW +PSW 4X8	

6-3. Electrical Parts List

AC-214N1/AC-214P1 BOARD
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*UC:YS-W270(UC)
*CE:YS-W270P(CE)

Ref. No. or Q'ty	Part No.	SP	Description
1pc *UC	A-8327-990-A	s	MOUNTED CIRCUIT BOARD, AC-214N1
*CE	A-8328-002-A	s	MOUNTED CIRCUIT BOARD, AC-214P1
2pcs	1-533-213-31	o	HOLDER, FUSE (D5.2)
3pcs	7-682-548-09	s	SCREW +B 3X8
C1 ⚠	1-137-525-11	s	CAPACITOR,FILM 0.1MF/250VAC
C2 ⚠	1-113-903-11	s	CAPACITOR,CERAMIC .001MF/250V
C3 ⚠	1-113-903-11	s	CAPACITOR,CERAMIC .001MF/250V
C4 ⚠	1-137-525-11	s	CAPACITOR,FILM 0.1MF/250VAC
C5 *UC ⚠	1-113-907-51	s	CAPACITOR, CERAMIC 2200PF/250V
*CE ⚠	1-113-903-11	s	CAPACITOR,CERAMIC .001MF/250V
C6 *UC ⚠	1-113-907-51	s	CAPACITOR, CERAMIC 2200PF/250V
*CE ⚠	1-113-903-11	s	CAPACITOR,CERAMIC .001MF/250V
C7 *UC	1-115-431-11	s	CAPACITOR,ELECT 220MF/315V(105
*CE	1-115-431-21	s	CAPACITOR, ELECT 100MF/400V
C8 *UC	1-115-431-11	s	CAPACITOR,ELECT 220MF/315V(105
*CE	1-115-431-21	s	CAPACITOR, ELECT 100MF/400V
C9	1-136-200-11	s	CAPACITOR,FILM 0.15MF/400V
C10	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C11	1-115-853-11	s	CAPACITOR,ELECT 47MF/16V(105C)
C13	1-115-824-11	s	CAPACITOR ELECT 18MF/50V(105)
C14	1-136-275-11	s	CAPASITOR PP FILM 390PF
C15	1-115-837-11	s	CAPACITOR, ELECT 470MF/50V
C16	1-115-837-11	s	CAPACITOR, ELECT 470MF/50V
C17	1-115-837-11	s	CAPACITOR, ELECT 470MF/50V
C18	1-115-837-11	s	CAPACITOR, ELECT 470MF/50V
C19	1-115-837-11	s	CAPACITOR, ELECT 470MF/50V
C21	1-115-824-11	s	CAPACITOR ELECT 18MF/50V(105)
C22	1-136-177-00	s	CAPACITOR,FILM 1MF/50V
C23	1-111-066-11	s	CAPACITOR,ELECT 820MF/25V 105
C24	1-111-066-11	s	CAPACITOR,ELECT 820MF/25V 105
C25	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C26	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C27	1-115-758-11	s	CAPACITOR ELECT 470MF/16V 105C
C28	1-115-824-11	s	CAPACITOR ELECT 18MF/50V(105)
C29	1-115-758-11	s	CAPACITOR ELECT 470MF/16V 105C
C30	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C31	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C32	1-115-758-11	s	CAPACITOR ELECT 470MF/16V 105C
C33	1-115-824-11	s	CAPACITOR ELECT 18MF/50V(105)
C34	1-164-227-11	s	CAPACITOR,CERAMIC 0.022MF/25V
C35	1-107-682-11	s	CAPACITOR,CHIP 1MF/16V (3216)
C36	1-107-902-91	s	CAPACITOR,ELECT 1MF/50V
C37	1-137-525-11	s	CAPACITOR,FILM 0.1MF/250VAC
CN1	1-564-321-00	s	PIN,CONNECTOR 2P
D1	8-719-052-84	s	DIODE LN4SB60
D4	8-719-302-98	s	DIODE RG4C (RECTI)
D7	8-719-069-33	s	DIODE SFPB-69V
D8	8-719-088-46	s	DIODE SB30-18
D10	8-719-069-33	s	DIODE SFPB-69V
F1 *UC ⚠	1-532-743-11	s	FUSE,GLASS TUBE 2A/125V(20MM)
*CE ⚠	1-576-229-11	s	FUSE (H.B.C.)
IC1	8-759-833-77	s	IC MIP0226SY1SO
IC2	8-759-701-59	s	IC NJM78M09FA
IC3	8-759-701-56	s	IC NJM78M05FA

(AC-214N1/AC-214P1 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
IC4	8-759-710-89	s	IC NJM431U (TE1)
JP1	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
JP3	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
JP4	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
JP5	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
L1 ⚠	1-411-836-11	s	COIL, LINE FILTER
L2 ⚠	1-429-354-11	s	TRANSFORMER, LINE FILTER
L3	1-412-519-11	s	INDUCTOR,MICRO 3.3UH
L4	1-412-519-11	s	INDUCTOR,MICRO 3.3UH
L5	1-412-519-11	s	INDUCTOR,MICRO 3.3UH
L6	1-412-028-11	s	INDUCTOR,CHIP 4.7UH (3225)
L7	1-412-028-11	s	INDUCTOR,CHIP 4.7UH (3225)
PH1 ⚠	8-749-016-81	s	PHOTO COUPLER PC123Y22
R4	1-215-904-11	s	RESISTOR,METAL FILM 100K/2W
R5	1-216-797-11	s	RESISTOR,CHIP 10 1/16W 1608
R9	1-215-883-11	s	RESISTOR,METAL FILM 33/2W
R12	1-215-894-11	s	RESISTOR,METAL FILM 2.2K/2W
R13	1-216-822-11	s	RESISTOR, CHIP 1.2K 1/16W 1608
R14	1-216-825-11	s	RESISTOR,CHIP 2.2K 1/16W 1608
R15	1-215-860-11	s	RESISTOR,METAL FILM 33/1W
R16	1-218-724-11	s	RESISTOR,CHIP 22K 1/16W(1608)
R17	1-218-700-11	s	RESISTOR,CHIP 2.2K 1/16W 1608
R18	1-218-708-11	s	RESISTOR, CHIP 4.7K 1/16W 1608
T1 ⚠	1-437-318-11	s	TRANSFORMER, DC-DC CONVERTER

CN-2213 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8327-993-A	s	MOUNTED CIRCUIT BOARD, CN-2213
D201	8-719-118-18	s	DIODE RD39M-B
D202	8-719-118-18	s	DIODE RD39M-B
D203	8-719-118-18	s	DIODE RD39M-B
D204	8-719-118-18	s	DIODE RD39M-B
D205	8-719-105-91	s	DIODE RD5.6M-B2
D206	8-719-105-91	s	DIODE RD5.6M-B2
D207	8-719-105-91	s	DIODE RD5.6M-B2
D208	8-719-105-91	s	DIODE RD5.6M-B2
D209	8-719-105-91	s	DIODE RD5.6M-B2
D210	8-719-105-91	s	DIODE RD5.6M-B2
D211	8-719-105-91	s	DIODE RD5.6M-B2
D212	8-719-105-91	s	DIODE RD5.6M-B2
D214	8-719-105-91	s	DIODE RD5.6M-B2
D215	8-719-105-91	s	DIODE RD5.6M-B2
D216	8-719-105-91	s	DIODE RD5.6M-B2
D217	8-719-105-91	s	DIODE RD5.6M-B2
D218	8-719-105-91	s	DIODE RD5.6M-B2
D219	8-719-105-91	s	DIODE RD5.6M-B2
D220	8-719-105-91	s	DIODE RD5.6M-B2
D221	8-719-105-91	s	DIODE RD5.6M-B2
D222	8-719-105-91	s	DIODE RD5.6M-B2
D223	8-719-105-91	s	DIODE RD5.6M-B2
D224	8-719-105-91	s	DIODE RD5.6M-B2
D2213	8-719-105-91	s	DIODE RD5.6M-B2
R202	1-218-285-11	s	RESISTOR,CHIP 75 1/16W (1608)
S201	1-571-738-11	s	SWITCH,SLIDE (2-2-2)

PS-616N2/PS-616P1 BOARD

*UC:YS-W270(UC)
*CE:YS-W270P(CE)

Ref. No. or Q'ty	Part No.	SP	Description
1pc *CE	A-8328-007-A	s	MOUNTED CIRCUIT BOARD, PS-616P1
*UC	A-8328-074-A	s	MOUNTED CIRCUIT BOARD, PS-616N2
4pcs	3-334-236-01	s	SHEET,INSULATING (PLA)
4pcs	4-363-146-00	o	HEAT SINK,V.OUT
4pcs	7-682-548-09	s	SCREW +B 3X8
C101	1-126-405-11	s	CAPACITOR,ELECT 10MF/50V(CHIP
C102	1-162-923-11	s	CAPACITOR,CERAMIC 47PF/50V CH
C103	1-126-396-11	s	CAPACITOR,ELECT 47MF/16V(CHIP)
C104	1-162-927-11	s	CAPACITOR,CERAMIC 100PF/50V CH
C105	1-107-914-11	s	CAPACITOR,ELECT 1000MF/50V
C106	1-162-910-11	s	CAPACITOR,CERAMIC 5PF/50V 1608
C107	1-126-396-11	s	CAPACITOR,ELECT 47MF/16V(CHIP)
C108	1-165-176-11	s	CAPACITOR,CERAMIC 47000PF/16V
C109	1-164-230-11	s	CAPACITOR,CERAMIC 220PF/50V
C110	1-126-396-11	s	CAPACITOR,ELECT 47MF/16V(CHIP)
C111	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C112	1-162-927-11	s	CAPACITOR,CERAMIC 100PF/50V CH
C113	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C114	1-164-230-11	s	CAPACITOR,CERAMIC 220PF/50V
C115	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C116	1-162-959-11	s	CAPACITOR,CERAMIC 330PF/50V SL
C117	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C118	1-126-396-11	s	CAPACITOR,ELECT 47MF/16V(CHIP)
C119	1-126-401-11	s	CAPACITOR, ELECT 1MF/50V(CHIP)
C120	1-162-910-11	s	CAPACITOR,CERAMIC 5PF/50V 1608
C121	1-126-392-11	s	CAPACITOR,CHIP ELECT100MF/6.3V
C122	1-162-910-11	s	CAPACITOR,CERAMIC 5PF/50V 1608
C123	1-126-401-11	s	CAPACITOR, ELECT 1MF/50V(CHIP)
C124	1-126-405-11	s	CAPACITOR,ELECT 10MF/50V(CHIP
C125	1-162-910-11	s	CAPACITOR,CERAMIC 5PF/50V 1608
C126	1-126-392-11	s	CAPACITOR,CHIP ELECT100MF/6.3V
C127	1-126-401-11	s	CAPACITOR, ELECT 1MF/50V(CHIP)
C128	1-126-400-11	s	CAPACITOR ELECT 22MF/35V(CHIP)
C130	1-126-396-11	s	CAPACITOR,ELECT 47MF/16V(CHIP)
C131	1-126-392-11	s	CAPACITOR,CHIP ELECT100MF/6.3V
C132	1-126-396-11	s	CAPACITOR,ELECT 47MF/16V(CHIP)
C133	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C134	1-126-400-11	s	CAPACITOR ELECT 22MF/35V(CHIP)
C135	1-104-329-11	s	CAPACITOR CERAMIC 0.1MF/50V
C136	1-162-965-11	s	CAPACITOR,CERAMIC 1500PF/50V B
C137	1-126-395-11	s	CAPACITOR,ELECT 22MF/16V(CHIP)
C138	1-115-416-11	s	CAPACITOR,CERAMIC 1000PF/25V
C139	1-115-467-11	s	CAPACITOR CERAMIC 0.22MF/10V B
C140	1-126-398-11	s	CAPACITOR ELECT 4.7MF/35V(CHIP
C141	1-126-390-11	s	CAPACITOR ELECT 22MF/6.3V(105)
C142	1-126-395-11	s	CAPACITOR,ELECT 22MF/16V(CHIP)
C143	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C144	1-126-392-11	s	CAPACITOR,CHIP ELECT100MF/6.3V
C145	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C147	1-126-395-11	s	CAPACITOR,ELECT 22MF/16V(CHIP)
C148	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C201	1-126-405-11	s	CAPACITOR,ELECT 10MF/50V(CHIP
C202	1-162-923-11	s	CAPACITOR,CERAMIC 47PF/50V CH
C203	1-126-396-11	s	CAPACITOR,ELECT 47MF/16V(CHIP)
C204	1-162-927-11	s	CAPACITOR,CERAMIC 100PF/50V CH

(PS-616N2/PS-616P1 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
C205	1-107-914-11	s	CAPACITOR,ELECT 1000MF/50V
C206	1-162-910-11	s	CAPACITOR,CERAMIC 5PF/50V 1608
C207	1-126-396-11	s	CAPACITOR,ELECT 47MF/16V(CHIP)
C208	1-165-176-11	s	CAPACITOR,CERAMIC 47000PF/16V
C209	1-164-230-11	s	CAPACITOR,CERAMIC 220PF/50V
C210	1-126-396-11	s	CAPACITOR,ELECT 47MF/16V(CHIP)
C211	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C212	1-162-927-11	s	CAPACITOR,CERAMIC 100PF/50V CH
C213	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C214	1-164-230-11	s	CAPACITOR,CERAMIC 220PF/50V
C215	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C216	1-162-959-11	s	CAPACITOR,CERAMIC 330PF/50V SL
C217	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C218	1-126-396-11	s	CAPACITOR,ELECT 47MF/16V(CHIP)
C219	1-126-401-11	s	CAPACITOR, ELECT 1MF/50V(CHIP)
C220	1-162-910-11	s	CAPACITOR,CERAMIC 5PF/50V 1608
C221	1-126-392-11	s	CAPACITOR,CHIP ELECT100MF/6.3V
C222	1-162-910-11	s	CAPACITOR,CERAMIC 5PF/50V 1608
C223	1-126-401-11	s	CAPACITOR, ELECT 1MF/50V(CHIP)
C224	1-126-405-11	s	CAPACITOR,ELECT 10MF/50V(CHIP
C225	1-162-910-11	s	CAPACITOR,CERAMIC 5PF/50V 1608
C226	1-126-392-11	s	CAPACITOR,CHIP ELECT100MF/6.3V
C227	1-126-401-11	s	CAPACITOR, ELECT 1MF/50V(CHIP)
C228	1-126-400-11	s	CAPACITOR ELECT 22MF/35V(CHIP)
C230	1-126-396-11	s	CAPACITOR,ELECT 47MF/16V(CHIP)
C231	1-126-392-11	s	CAPACITOR,CHIP ELECT100MF/6.3V
C232	1-126-396-11	s	CAPACITOR,ELECT 47MF/16V(CHIP)
C233	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C234	1-126-400-11	s	CAPACITOR ELECT 22MF/35V(CHIP)
C235	1-104-329-11	s	CAPACITOR CERAMIC 0.1MF/50V
C236	1-162-965-11	s	CAPACITOR,CERAMIC 1500PF/50V B
C237	1-126-395-11	s	CAPACITOR,ELECT 22MF/16V(CHIP)
C238	1-115-416-11	s	CAPACITOR,CERAMIC 1000PF/25V
C239	1-115-467-11	s	CAPACITOR CERAMIC 0.22MF/10V B
C240	1-126-398-11	s	CAPACITOR ELECT 4.7MF/35V(CHIP
C241	1-126-390-11	s	CAPACITOR ELECT 22MF/6.3V(105)
C243	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C245	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C247	1-126-395-11	s	CAPACITOR,ELECT 22MF/16V(CHIP)
C248	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C301	1-126-405-11	s	CAPACITOR,ELECT 10MF/50V(CHIP
C302	1-162-923-11	s	CAPACITOR,CERAMIC 47PF/50V CH
C303	1-126-396-11	s	CAPACITOR,ELECT 47MF/16V(CHIP)
C304	1-162-927-11	s	CAPACITOR,CERAMIC 100PF/50V CH
C305	1-107-914-11	s	CAPACITOR,ELECT 1000MF/50V
C306	1-162-910-11	s	CAPACITOR,CERAMIC 5PF/50V 1608
C307	1-126-396-11	s	CAPACITOR,ELECT 47MF/16V(CHIP)
C308	1-165-176-11	s	CAPACITOR,CERAMIC 47000PF/16V
C309	1-164-230-11	s	CAPACITOR,CERAMIC 220PF/50V
C310	1-126-396-11	s	CAPACITOR,ELECT 47MF/16V(CHIP)
C311	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C312	1-162-927-11	s	CAPACITOR,CERAMIC 100PF/50V CH
C313	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C314	1-164-230-11	s	CAPACITOR,CERAMIC 220PF/50V
C315	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C316	1-162-959-11	s	CAPACITOR,CERAMIC 330PF/50V SL
C317	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C318	1-126-396-11	s	CAPACITOR,ELECT 47MF/16V(CHIP)
C319	1-126-401-11	s	CAPACITOR, ELECT 1MF/50V(CHIP)

(PS-616N2/PS-616P1 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
C320	1-162-910-11	s	CAPACITOR,CERAMIC 5PF/50V 1608
C321	1-126-392-11	s	CAPACITOR,CHIP ELECT100MF/6.3V
C322	1-162-910-11	s	CAPACITOR,CERAMIC 5PF/50V 1608
C323	1-126-401-11	s	CAPACITOR, ELECT 1MF/50V(CHIP)
C324	1-126-405-11	s	CAPACITOR,ELECT 10MF/50V(CHIP
C325	1-162-910-11	s	CAPACITOR,CERAMIC 5PF/50V 1608
C326	1-126-392-11	s	CAPACITOR,CHIP ELECT100MF/6.3V
C327	1-126-401-11	s	CAPACITOR, ELECT 1MF/50V(CHIP)
C328	1-126-400-11	s	CAPACITOR ELECT 22MF/35V(CHIP)
C330	1-126-396-11	s	CAPACITOR,ELECT 47MF/16V(CHIP)
C331	1-126-392-11	s	CAPACITOR,CHIP ELECT100MF/6.3V
C332	1-126-396-11	s	CAPACITOR,ELECT 47MF/16V(CHIP)
C333	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C334	1-126-400-11	s	CAPACITOR ELECT 22MF/35V(CHIP)
C335	1-104-329-11	s	CAPACITOR CERAMIC 0.1MF/50V
C336	1-162-965-11	s	CAPACITOR,CERAMIC 1500PF/50V B
C337	1-126-395-11	s	CAPACITOR,ELECT 22MF/16V(CHIP)
C338	1-115-416-11	s	CAPACITOR,CERAMIC 1000PF/25V
C339	1-115-467-11	s	CAPACITOR CERAMIC 0.22MF/10V B
C340	1-126-398-11	s	CAPACITOR ELECT 4.7MF/35V(CHIP
C341	1-126-390-11	s	CAPACITOR ELECT 22MF/6.3V(105)
C343	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C345	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C347	1-126-395-11	s	CAPACITOR,ELECT 22MF/16V(CHIP)
C348	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C401	1-126-405-11	s	CAPACITOR,ELECT 10MF/50V(CHIP
C402	1-162-923-11	s	CAPACITOR,CERAMIC 47PF/50V CH
C403	1-126-396-11	s	CAPACITOR,ELECT 47MF/16V(CHIP)
C404	1-162-927-11	s	CAPACITOR,CERAMIC 100PF/50V CH
C405	1-107-914-11	s	CAPACITOR,ELECT 1000MF/50V
C406	1-162-910-11	s	CAPACITOR,CERAMIC 5PF/50V 1608
C407	1-126-396-11	s	CAPACITOR,ELECT 47MF/16V(CHIP)
C408	1-165-176-11	s	CAPACITOR,CERAMIC 47000PF/16V
C409	1-164-230-11	s	CAPACITOR,CERAMIC 220PF/50V
C410	1-126-396-11	s	CAPACITOR,ELECT 47MF/16V(CHIP)
C411	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C412	1-162-927-11	s	CAPACITOR,CERAMIC 100PF/50V CH
C413	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C414	1-164-230-11	s	CAPACITOR,CERAMIC 220PF/50V
C415	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C416	1-162-959-11	s	CAPACITOR,CERAMIC 330PF/50V SL
C417	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C418	1-126-396-11	s	CAPACITOR,ELECT 47MF/16V(CHIP)
C419	1-126-401-11	s	CAPACITOR, ELECT 1MF/50V(CHIP)
C420	1-162-910-11	s	CAPACITOR,CERAMIC 5PF/50V 1608
C421	1-126-392-11	s	CAPACITOR,CHIP ELECT100MF/6.3V
C422	1-162-910-11	s	CAPACITOR,CERAMIC 5PF/50V 1608
C423	1-126-401-11	s	CAPACITOR, ELECT 1MF/50V(CHIP)
C424	1-126-405-11	s	CAPACITOR,ELECT 10MF/50V(CHIP
C425	1-162-910-11	s	CAPACITOR,CERAMIC 5PF/50V 1608
C426	1-126-392-11	s	CAPACITOR,CHIP ELECT100MF/6.3V
C427	1-126-401-11	s	CAPACITOR, ELECT 1MF/50V(CHIP)
C428	1-126-400-11	s	CAPACITOR ELECT 22MF/35V(CHIP)
C430	1-126-396-11	s	CAPACITOR,ELECT 47MF/16V(CHIP)
C431	1-126-392-11	s	CAPACITOR,CHIP ELECT100MF/6.3V
C432	1-126-396-11	s	CAPACITOR,ELECT 47MF/16V(CHIP)
C433	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C434	1-126-400-11	s	CAPACITOR ELECT 22MF/35V(CHIP)
C435	1-104-329-11	s	CAPACITOR CERAMIC 0.1MF/50V

(PS-616N2/PS-616P1 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
C436	1-162-965-11	s	CAPACITOR,CERAMIC 1500PF/50V B
C437	1-126-395-11	s	CAPACITOR,ELECT 22MF/16V(CHIP)
C438	1-115-416-11	s	CAPACITOR,CERAMIC 1000PF/25V
C439	1-115-467-11	s	CAPACITOR CERAMIC 0.22MF/10V B
C440	1-126-398-11	s	CAPACITOR ELECT 4.7MF/35V(CHIP
C441	1-126-390-11	s	CAPACITOR ELECT 22MF/6.3V(105)
C443	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C445	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C447	1-126-395-11	s	CAPACITOR,ELECT 22MF/16V(CHIP)
C448	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C501	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C502	1-126-390-11	s	CAPACITOR ELECT 22MF/6.3V(105)
C503 *UC	1-162-922-11	s	CAPACITOR,CERAMIC 39PF/50V CH
*CE	1-162-920-11	s	CAPACITOR,CERAMIC 27PF/50V CH
C504	1-162-919-11	s	CAPACITOR,CERAMIC 22PF/50V CH
C505	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C506	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C507	1-126-390-11	s	CAPACITOR ELECT 22MF/6.3V(105)
C508	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C509	1-126-390-11	s	CAPACITOR ELECT 22MF/6.3V(105)
C510	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C511	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C512	1-162-966-11	s	CAPACITOR,CERAMIC 2200PF/50V B
C513	1-126-395-11	s	CAPACITOR,ELECT 22MF/16V(CHIP)
C514	1-126-390-11	s	CAPACITOR ELECT 22MF/6.3V(105)
C515	1-125-837-11	s	CAPACITOR,CHIP CERAMIC1MF/6.3V
C516	1-126-390-11	s	CAPACITOR ELECT 22MF/6.3V(105)
C517	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C518	1-164-315-11	s	CAPACITOR,CERAMIC 470PF/50V CH
C519	1-164-315-11	s	CAPACITOR,CERAMIC 470PF/50V CH
C520	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C522	1-162-966-11	s	CAPACITOR,CERAMIC 2200PF/50V B
C523	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C524	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C525	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
CN504	1-691-591-11	o	PIN,CONNECTOR (8P)(SMD)(1.5MM)
CN506	1-764-177-11	o	PIN,CONNECTOR (7P)(SMD)(1.5MM)
CN508	1-691-591-11	o	PIN,CONNECTOR (8P)(SMD)(1.5MM)
CN510	1-691-591-11	o	PIN,CONNECTOR (8P)(SMD)(1.5MM)
CN512	1-764-177-11	o	PIN,CONNECTOR (7P)(SMD)(1.5MM)
CT501	1-141-322-11	s	CAPACITOR,VAR,TRIMMER
D101	8-719-037-09	s	DIODE RD8.2SB1-T1
D102	8-719-801-48	s	DIODE 1SS193
D103	8-719-037-09	s	DIODE RD8.2SB1-T1
D104	8-719-801-48	s	DIODE 1SS193
D105	8-719-801-78	s	DIODE 1SS184
D106	8-719-801-48	s	DIODE 1SS193
D201	8-719-037-09	s	DIODE RD8.2SB1-T1
D202	8-719-801-48	s	DIODE 1SS193
D203	8-719-037-09	s	DIODE RD8.2SB1-T1
D204	8-719-801-48	s	DIODE 1SS193
D205	8-719-801-78	s	DIODE 1SS184
D206	8-719-801-48	s	DIODE 1SS193
D301	8-719-037-09	s	DIODE RD8.2SB1-T1
D302	8-719-801-48	s	DIODE 1SS193
D303	8-719-037-09	s	DIODE RD8.2SB1-T1
D304	8-719-801-48	s	DIODE 1SS193
D305	8-719-801-78	s	DIODE 1SS184
D306	8-719-801-48	s	DIODE 1SS193

(PS-616N2/PS-616P1 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
D401	8-719-037-09	s	DIODE RD8.2SB1-T1
D402	8-719-801-48	s	DIODE 1SS193
D403	8-719-037-09	s	DIODE RD8.2SB1-T1
D404	8-719-801-48	s	DIODE 1SS193
D405	8-719-801-78	s	DIODE 1SS184
D406	8-719-801-48	s	DIODE 1SS193
IC101	8-759-640-14	s	IC TK15420MTL
IC102	8-759-640-14	s	IC TK15420MTL
IC103	8-759-100-93	s	IC UPC393G2
IC104	8-759-011-65	s	IC MC74HC4053F
IC105	8-759-011-65	s	IC MC74HC4053F
IC106	8-759-710-12	s	IC NJM2230M
IC107	8-759-710-12	s	IC NJM2230M
IC108	8-759-243-19	s	IC TC7SU04F
IC109	8-759-243-19	s	IC TC7SU04F
IC110	8-759-234-20	s	IC TC7S08F
IC181	8-759-640-14	s	IC TK15420MTL
IC201	8-759-640-14	s	IC TK15420MTL
IC202	8-759-640-14	s	IC TK15420MTL
IC203	8-759-100-93	s	IC UPC393G2
IC204	8-759-011-65	s	IC MC74HC4053F
IC205	8-759-011-65	s	IC MC74HC4053F
IC206	8-759-710-12	s	IC NJM2230M
IC207	8-759-710-12	s	IC NJM2230M
IC208	8-759-243-19	s	IC TC7SU04F
IC209	8-759-243-19	s	IC TC7SU04F
IC210	8-759-234-20	s	IC TC7S08F
IC281	8-759-640-14	s	IC TK15420MTL
IC301	8-759-640-14	s	IC TK15420MTL
IC302	8-759-640-14	s	IC TK15420MTL
IC303	8-759-100-93	s	IC UPC393G2
IC304	8-759-011-65	s	IC MC74HC4053F
IC305	8-759-011-65	s	IC MC74HC4053F
IC306	8-759-710-12	s	IC NJM2230M
IC307	8-759-710-12	s	IC NJM2230M
IC308	8-759-243-19	s	IC TC7SU04F
IC309	8-759-243-19	s	IC TC7SU04F
IC310	8-759-234-20	s	IC TC7S08F
IC381	8-759-640-14	s	IC TK15420MTL
IC401	8-759-640-14	s	IC TK15420MTL
IC402	8-759-640-14	s	IC TK15420MTL
IC403	8-759-100-93	s	IC UPC393G2
IC404	8-759-011-65	s	IC MC74HC4053F
IC405	8-759-011-65	s	IC MC74HC4053F
IC406	8-759-710-12	s	IC NJM2230M
IC407	8-759-710-12	s	IC NJM2230M
IC408	8-759-243-19	s	IC TC7SU04F
IC409	8-759-243-19	s	IC TC7SU04F
IC410	8-759-234-20	s	IC TC7S08F
IC481	8-759-640-14	s	IC TK15420MTL
IC501	8-759-243-19	s	IC TC7SU04F
IC502	8-759-243-19	s	IC TC7SU04F
IC503	8-759-234-20	s	IC TC7S08F
IC504	8-752-326-08	s	IC CXD1159Q
IC505	8-759-243-19	s	IC TC7SU04F
IC506	8-759-236-47	s	IC TC74HC164AF (EL)
IC507	8-759-239-34	s	IC TC74HC4538AF
IC508	8-759-100-93	s	IC UPC393G2

(PS-616N2/PS-616P1 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
IC509	8-759-243-19	s	IC TC7SU04F
IC510	8-759-084-79	s	IC TC7S14F
IC511	8-759-243-19	s	IC TC7SU04F
IC512	8-759-084-79	s	IC TC7S14F
L101	1-410-626-11	s	COIL, CHOKE 47UH
L102	1-412-030-11	s	INDUCTOR,CHIP 22UH (3225)
L104	1-412-030-11	s	INDUCTOR,CHIP 22UH (3225)
L201	1-410-626-11	s	COIL, CHOKE 47UH
L202	1-412-030-11	s	INDUCTOR,CHIP 22UH (3225)
L203	1-412-030-11	s	INDUCTOR,CHIP 22UH (3225)
L301	1-410-626-11	s	COIL, CHOKE 47UH
L302	1-412-030-11	s	INDUCTOR,CHIP 22UH (3225)
L303	1-412-030-11	s	INDUCTOR,CHIP 22UH (3225)
L401	1-410-626-11	s	COIL, CHOKE 47UH
L402	1-412-030-11	s	INDUCTOR,CHIP 22UH (3225)
L403	1-412-030-11	s	INDUCTOR,CHIP 22UH (3225)
L501	1-412-030-11	s	INDUCTOR,CHIP 22UH (3225)
L502	1-412-030-11	s	INDUCTOR,CHIP 22UH (3225)
L503	1-412-030-11	s	INDUCTOR,CHIP 22UH (3225)
L504	1-412-030-11	s	INDUCTOR,CHIP 22UH (3225)
Q101	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q102	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q103	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q104	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q105	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q106	8-729-216-22	s	TRANSISTOR 2SA1162-G
Q107	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q108	8-729-122-03	s	TRANSISTOR 2SA1220A-P
Q109	8-729-216-22	s	TRANSISTOR 2SA1162-G
Q110	8-729-900-53	s	TRANSISTOR DTC114EK
Q111	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q112	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q113	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q114	8-729-216-22	s	TRANSISTOR 2SA1162-G
Q115	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q116	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q201	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q202	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q203	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q204	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q205	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q206	8-729-216-22	s	TRANSISTOR 2SA1162-G
Q207	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q208	8-729-122-03	s	TRANSISTOR 2SA1220A-P
Q209	8-729-216-22	s	TRANSISTOR 2SA1162-G
Q210	8-729-900-53	s	TRANSISTOR DTC114EK
Q211	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q212	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q213	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q214	8-729-216-22	s	TRANSISTOR 2SA1162-G
Q215	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q216	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q301	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q302	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q303	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q304	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q305	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q306	8-729-216-22	s	TRANSISTOR 2SA1162-G

(PS-616N2/PS-616P1 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
Q307	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q308	8-729-122-03	s	TRANSISTOR 2SA1220A-P
Q309	8-729-216-22	s	TRANSISTOR 2SA1162-G
Q310	8-729-900-53	s	TRANSISTOR DTC114EK
Q311	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q312	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q313	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q314	8-729-216-22	s	TRANSISTOR 2SA1162-G
Q315	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q316	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q401	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q402	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q403	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q404	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q405	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q406	8-729-216-22	s	TRANSISTOR 2SA1162-G
Q407	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q408	8-729-122-03	s	TRANSISTOR 2SA1220A-P
Q409	8-729-216-22	s	TRANSISTOR 2SA1162-G
Q410	8-729-900-53	s	TRANSISTOR DTC114EK
Q411	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q412	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q413	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q414	8-729-216-22	s	TRANSISTOR 2SA1162-G
Q415	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q416	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q501	8-729-216-22	s	TRANSISTOR 2SA1162-G
Q502	8-729-230-60	s	TRANSISTOR 2SA1586-YG
Q503	8-729-230-60	s	TRANSISTOR 2SA1586-YG
Q504	8-729-216-22	s	TRANSISTOR 2SA1162-G
Q505	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q506	8-729-230-60	s	TRANSISTOR 2SA1586-YG
R101	1-216-809-11	s	RESISTOR,CHIP 100 1/16W 1608
R102	1-216-843-11	s	RESISTOR,CHIP 68K 1/16W (1608)
R103	1-216-841-11	s	RESISTOR, CHIP 47K 1/16W 1608
R104	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R105	1-218-285-11	s	RESISTOR,CHIP 75 1/16W (1608)
R106	1-218-289-11	s	RESISTOR,CHIP 510 1/16W (1608)
R107	1-218-289-11	s	RESISTOR,CHIP 510 1/16W (1608)
R108	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R109	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R110	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R111	1-216-797-11	s	RESISTOR,CHIP 10 1/16W 1608
R112	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R113	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R114	1-216-825-11	s	RESISTOR,CHIP 2.2K 1/16W 1608
R115	1-216-825-11	s	RESISTOR,CHIP 2.2K 1/16W 1608
R116	1-216-836-11	s	RESISTOR, CHIP 18K 1/16W 1608
R117	1-216-825-11	s	RESISTOR,CHIP 2.2K 1/16W 1608
R118	1-216-835-11	s	RESISTOR,CHIP 15K 1/16W
R119	1-216-819-11	s	RESISTOR,CHIP 680 1/16W 1608
R120	1-216-836-11	s	RESISTOR, CHIP 18K 1/16W 1608
R121	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R122	1-216-835-11	s	RESISTOR,CHIP 15K 1/16W
R123	1-216-812-11	s	RESISTOR,CHIP 180 1/16W 1608
R124	1-216-836-11	s	RESISTOR, CHIP 18K 1/16W 1608
R125	1-216-819-11	s	RESISTOR,CHIP 680 1/16W 1608
R126	1-216-835-11	s	RESISTOR,CHIP 15K 1/16W

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(PS-616N2/PS-616P1 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R127	1-216-807-11	s	RESISTOR, CHIP 68 1/16W 1608
R128	1-216-815-11	s	RESISTOR,CHIP 330 1/16W 1608
R129	1-216-845-11	s	RESISTOR,CHIP 100K 1/16W(1608)
R130	1-218-836-11	s	RESISTOR,CHIP 360 1/16W (1608)
R131	1-218-285-11	s	RESISTOR,CHIP 75 1/16W (1608)
R132	1-216-815-11	s	RESISTOR,CHIP 330 1/16W 1608
R133	1-216-841-11	s	RESISTOR, CHIP 47K 1/16W 1608
R134	1-216-841-11	s	RESISTOR, CHIP 47K 1/16W 1608
R135	1-216-845-11	s	RESISTOR,CHIP 100K 1/16W(1608)
R136	1-218-285-11	s	RESISTOR,CHIP 75 1/16W (1608)
R137	1-216-825-11	s	RESISTOR,CHIP 2.2K 1/16W 1608
R138	1-216-839-11	s	RESISTOR,CHIP 33K 1/16W 1608
R140	1-216-837-11	s	RESISTOR,CHIP 22K 1/16W 1608
R141	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R142	1-216-830-11	s	RESISTOR,CHIP 5.6K 1/16W 1608
R143	1-216-841-11	s	RESISTOR, CHIP 47K 1/16W 1608
R144	1-216-848-11	s	RESISTOR,CHIP 180K 1/16 (1608)
R145	1-218-231-11	s	RESISTOR, CHIP 1 1/2W (4532)
R146	1-216-810-11	s	RESISTOR, CHIP 120 1/16W 1608
R147	1-216-823-11	s	RESISTOR, CHIP 1.5K 1/16W
R148	1-216-837-11	s	RESISTOR,CHIP 22K 1/16W 1608
R149	1-216-838-11	s	RESISTOR CHIP 27K 1/16W(1608)
R150	1-216-827-11	s	RESISTOR, CHIP 3.3K 1/16W 1608
R151	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R152	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R153	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R154	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R155	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R156	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R157	1-216-827-11	s	RESISTOR, CHIP 3.3K 1/16W 1608
R158	1-216-841-11	s	RESISTOR, CHIP 47K 1/16W 1608
R159	1-216-837-11	s	RESISTOR,CHIP 22K 1/16W 1608
R160	1-216-840-11	s	RESISTOR,CHIP 39K 1/16W 1608
R161	1-216-849-11	s	RESISTOR,CHIP 220K 1/16W 1608
R162	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R163	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R164	1-216-829-11	s	RESISTOR,CHIP 4.7K 1/16W(1608)
R165	1-216-829-11	s	RESISTOR,CHIP 4.7K 1/16W(1608)
R166	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R167	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R168 *UC	1-218-880-11	s	RESISTOR,CHIP 24K 1/16W (1608)
*CE	1-218-881-11	s	RESISTOR, CHIP 27K 1/16W(1608)
R169	1-216-841-11	s	RESISTOR, CHIP 47K 1/16W 1608
R170	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R171	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R172	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R173	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R174	1-216-841-11	s	RESISTOR, CHIP 47K 1/16W 1608
R175	1-216-841-11	s	RESISTOR, CHIP 47K 1/16W 1608
R176	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R177	1-218-285-11	s	RESISTOR,CHIP 75 1/16W (1608)
R178	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R180	1-249-426-11	s	RES,CARBON 5.6K 1/4W (SMALL)
R190	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R192	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R193	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R201	1-216-809-11	s	RESISTOR,CHIP 100 1/16W 1608
R202	1-216-843-11	s	RESISTOR,CHIP 68K 1/16W (1608)
R203	1-216-841-11	s	RESISTOR, CHIP 47K 1/16W 1608

(PS-616N2/PS-616P1 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R204	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R205	1-218-285-11	s	RESISTOR,CHIP 75 1/16W (1608)
R206	1-218-289-11	s	RESISTOR,CHIP 510 1/16W (1608)
R207	1-218-289-11	s	RESISTOR,CHIP 510 1/16W (1608)
R208	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R209	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R210	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R211	1-216-797-11	s	RESISTOR,CHIP 10 1/16W 1608
R212	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R213	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R214	1-216-825-11	s	RESISTOR,CHIP 2.2K 1/16W 1608
R215	1-216-825-11	s	RESISTOR,CHIP 2.2K 1/16W 1608
R216	1-216-836-11	s	RESISTOR, CHIP 18K 1/16W 1608
R217	1-216-825-11	s	RESISTOR,CHIP 2.2K 1/16W 1608
R218	1-216-835-11	s	RESISTOR,CHIP 15K 1/16W
R219	1-216-819-11	s	RESISTOR,CHIP 680 1/16W 1608
R220	1-216-836-11	s	RESISTOR, CHIP 18K 1/16W 1608
R221	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R222	1-216-835-11	s	RESISTOR,CHIP 15K 1/16W
R223	1-216-812-11	s	RESISTOR,CHIP 180 1/16W 1608
R224	1-216-836-11	s	RESISTOR, CHIP 18K 1/16W 1608
R225	1-216-819-11	s	RESISTOR,CHIP 680 1/16W 1608
R226	1-216-835-11	s	RESISTOR,CHIP 15K 1/16W
R227	1-216-807-11	s	RESISTOR, CHIP 68 1/16W 1608
R228	1-216-815-11	s	RESISTOR,CHIP 330 1/16W 1608
R229	1-216-845-11	s	RESISTOR,CHIP 100K 1/16W(1608)
R230	1-218-836-11	s	RESISTOR,CHIP 360 1/16W (1608)
R231	1-218-285-11	s	RESISTOR,CHIP 75 1/16W (1608)
R232	1-216-815-11	s	RESISTOR,CHIP 330 1/16W 1608
R233	1-216-841-11	s	RESISTOR, CHIP 47K 1/16W 1608
R234	1-216-841-11	s	RESISTOR, CHIP 47K 1/16W 1608
R235	1-216-845-11	s	RESISTOR,CHIP 100K 1/16W(1608)
R236	1-218-285-11	s	RESISTOR,CHIP 75 1/16W (1608)
R237	1-216-825-11	s	RESISTOR,CHIP 2.2K 1/16W 1608
R238	1-216-839-11	s	RESISTOR,CHIP 33K 1/16W 1608
R240	1-216-837-11	s	RESISTOR,CHIP 22K 1/16W 1608
R241	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R242	1-216-830-11	s	RESISTOR,CHIP 5.6K 1/16W 1608
R243	1-216-841-11	s	RESISTOR, CHIP 47K 1/16W 1608
R244	1-216-848-11	s	RESISTOR,CHIP 180K 1/16 (1608)
R245	1-218-231-11	s	RESISTOR, CHIP 1 1/2W (4532)
R246	1-216-810-11	s	RESISTOR, CHIP 120 1/16W 1608
R247	1-216-823-11	s	RESISTOR, CHIP 1.5K 1/16W
R248	1-216-837-11	s	RESISTOR,CHIP 22K 1/16W 1608
R249	1-216-838-11	s	RESISTOR CHIP 27K 1/16W(1608)
R250	1-216-827-11	s	RESISTOR, CHIP 3.3K 1/16W 1608
R251	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R252	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R253	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R254	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R255	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R256	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R257	1-216-827-11	s	RESISTOR, CHIP 3.3K 1/16W 1608
R258	1-216-841-11	s	RESISTOR, CHIP 47K 1/16W 1608
R259	1-216-837-11	s	RESISTOR,CHIP 22K 1/16W 1608
R260	1-216-840-11	s	RESISTOR,CHIP 39K 1/16W 1608
R261	1-216-849-11	s	RESISTOR,CHIP 220K 1/16W 1608
R262	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)

(PS-616N2/PS-616P1 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R263	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R264	1-216-829-11	s	RESISTOR,CHIP 4.7K 1/16W(1608)
R265	1-216-829-11	s	RESISTOR,CHIP 4.7K 1/16W(1608)
R266	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R267	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R268 *UC	1-218-880-11	s	RESISTOR,CHIP 24K 1/16W (1608)
*CE	1-218-881-11	s	RESISTOR, CHIP 27K 1/16W(1608)
R269	1-216-841-11	s	RESISTOR, CHIP 47K 1/16W 1608
R270	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R271	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R280	1-249-426-11	s	RES,CARBON 5.6K 1/4W (SMALL)
R290	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R292	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R293	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R301	1-216-809-11	s	RESISTOR,CHIP 100 1/16W 1608
R302	1-216-843-11	s	RESISTOR,CHIP 68K 1/16W (1608)
R303	1-216-841-11	s	RESISTOR, CHIP 47K 1/16W 1608
R304	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R305	1-218-285-11	s	RESISTOR,CHIP 75 1/16W (1608)
R306	1-218-289-11	s	RESISTOR,CHIP 510 1/16W (1608)
R307	1-218-289-11	s	RESISTOR,CHIP 510 1/16W (1608)
R308	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R309	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R310	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R311	1-216-797-11	s	RESISTOR,CHIP 10 1/16W 1608
R312	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R313	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R314	1-216-825-11	s	RESISTOR,CHIP 2.2K 1/16W 1608
R315	1-216-825-11	s	RESISTOR,CHIP 2.2K 1/16W 1608
R316	1-216-836-11	s	RESISTOR, CHIP 18K 1/16W 1608
R317	1-216-825-11	s	RESISTOR,CHIP 2.2K 1/16W 1608
R318	1-216-835-11	s	RESISTOR,CHIP 15K 1/16W
R319	1-216-819-11	s	RESISTOR,CHIP 680 1/16W 1608
R320	1-216-836-11	s	RESISTOR, CHIP 18K 1/16W 1608
R321	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R322	1-216-835-11	s	RESISTOR,CHIP 15K 1/16W
R323	1-216-812-11	s	RESISTOR,CHIP 180 1/16W 1608
R324	1-216-836-11	s	RESISTOR, CHIP 18K 1/16W 1608
R325	1-216-819-11	s	RESISTOR,CHIP 680 1/16W 1608
R326	1-216-835-11	s	RESISTOR,CHIP 15K 1/16W
R327	1-216-807-11	s	RESISTOR, CHIP 68 1/16W 1608
R328	1-216-815-11	s	RESISTOR,CHIP 330 1/16W 1608
R329	1-216-845-11	s	RESISTOR,CHIP 100K 1/16W(1608)
R330	1-218-836-11	s	RESISTOR,CHIP 360 1/16W (1608)
R331	1-218-285-11	s	RESISTOR,CHIP 75 1/16W (1608)
R332	1-216-815-11	s	RESISTOR,CHIP 330 1/16W 1608
R333	1-216-841-11	s	RESISTOR, CHIP 47K 1/16W 1608
R334	1-216-841-11	s	RESISTOR, CHIP 47K 1/16W 1608
R335	1-216-845-11	s	RESISTOR,CHIP 100K 1/16W(1608)
R336	1-218-285-11	s	RESISTOR,CHIP 75 1/16W (1608)
R337	1-216-825-11	s	RESISTOR,CHIP 2.2K 1/16W 1608
R338	1-216-839-11	s	RESISTOR,CHIP 33K 1/16W 1608
R340	1-216-837-11	s	RESISTOR,CHIP 22K 1/16W 1608
R341	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R342	1-216-830-11	s	RESISTOR,CHIP 5.6K 1/16W 1608
R343	1-216-841-11	s	RESISTOR, CHIP 47K 1/16W 1608
R344	1-216-848-11	s	RESISTOR,CHIP 180K 1/16 (1608)
R345	1-218-231-11	s	RESISTOR, CHIP 1 1/2W (4532)
R346	1-216-810-11	s	RESISTOR, CHIP 120 1/16W 1608

(PS-616N2/PS-616P1 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R347	1-216-823-11	s	RESISTOR, CHIP 1.5K 1/16W
R348	1-216-837-11	s	RESISTOR,CHIP 22K 1/16W 1608
R349	1-216-838-11	s	RESISTOR CHIP 27K 1/16W(1608)
R350	1-216-827-11	s	RESISTOR, CHIP 3.3K 1/16W 1608
R351	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R352	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R353	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R354	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R355	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R356	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R357	1-216-827-11	s	RESISTOR, CHIP 3.3K 1/16W 1608
R358	1-216-841-11	s	RESISTOR, CHIP 47K 1/16W 1608
R359	1-216-837-11	s	RESISTOR,CHIP 22K 1/16W 1608
R360	1-216-840-11	s	RESISTOR,CHIP 39K 1/16W 1608
R361	1-216-849-11	s	RESISTOR,CHIP 220K 1/16W 1608
R362	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R363	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R364	1-216-829-11	s	RESISTOR,CHIP 4.7K 1/16W(1608)
R365	1-216-829-11	s	RESISTOR,CHIP 4.7K 1/16W(1608)
R366	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R367	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R368 *UC	1-218-880-11	s	RESISTOR,CHIP 24K 1/16W (1608)
*CE	1-218-881-11	s	RESISTOR, CHIP 27K 1/16W(1608)
R369	1-216-841-11	s	RESISTOR, CHIP 47K 1/16W 1608
R370	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R371	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R380	1-249-426-11	s	RES,CARBON 5.6K 1/4W (SMALL)
R390	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R392	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R393	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R401	1-216-809-11	s	RESISTOR,CHIP 100 1/16W 1608
R402	1-216-843-11	s	RESISTOR,CHIP 68K 1/16W (1608)
R403	1-216-841-11	s	RESISTOR, CHIP 47K 1/16W 1608
R404	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R405	1-218-285-11	s	RESISTOR,CHIP 75 1/16W (1608)
R406	1-218-289-11	s	RESISTOR,CHIP 510 1/16W (1608)
R407	1-218-289-11	s	RESISTOR,CHIP 510 1/16W (1608)
R408	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R409	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R410	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R411	1-216-797-11	s	RESISTOR,CHIP 10 1/16W 1608
R412	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R413	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R414	1-216-825-11	s	RESISTOR,CHIP 2.2K 1/16W 1608
R415	1-216-825-11	s	RESISTOR,CHIP 2.2K 1/16W 1608
R416	1-216-836-11	s	RESISTOR, CHIP 18K 1/16W 1608
R417	1-216-825-11	s	RESISTOR,CHIP 2.2K 1/16W 1608
R418	1-216-835-11	s	RESISTOR,CHIP 15K 1/16W
R419	1-216-819-11	s	RESISTOR,CHIP 680 1/16W 1608
R420	1-216-836-11	s	RESISTOR, CHIP 18K 1/16W 1608
R421	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R422	1-216-835-11	s	RESISTOR,CHIP 15K 1/16W
R423	1-216-812-11	s	RESISTOR,CHIP 180 1/16W 1608
R424	1-216-836-11	s	RESISTOR, CHIP 18K 1/16W 1608
R425	1-216-819-11	s	RESISTOR,CHIP 680 1/16W 1608
R426	1-216-835-11	s	RESISTOR,CHIP 15K 1/16W
R427	1-216-807-11	s	RESISTOR, CHIP 68 1/16W 1608
R428	1-216-815-11	s	RESISTOR,CHIP 330 1/16W 1608
R429	1-216-845-11	s	RESISTOR,CHIP 100K 1/16W(1608)

(PS-616N2/PS-616P1 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R430	1-218-836-11	s	RESISTOR,CHIP 360 1/16W (1608)
R431	1-218-285-11	s	RESISTOR,CHIP 75 1/16W (1608)
R432	1-216-815-11	s	RESISTOR,CHIP 330 1/16W 1608
R433	1-216-841-11	s	RESISTOR, CHIP 47K 1/16W 1608
R434	1-216-841-11	s	RESISTOR, CHIP 47K 1/16W 1608
R435	1-216-845-11	s	RESISTOR,CHIP 100K 1/16W(1608)
R436	1-218-285-11	s	RESISTOR,CHIP 75 1/16W (1608)
R437	1-216-825-11	s	RESISTOR,CHIP 2.2K 1/16W 1608
R438	1-216-839-11	s	RESISTOR,CHIP 33K 1/16W 1608
R440	1-216-837-11	s	RESISTOR,CHIP 22K 1/16W 1608
R441	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R442	1-216-830-11	s	RESISTOR,CHIP 5.6K 1/16W 1608
R443	1-216-841-11	s	RESISTOR, CHIP 47K 1/16W 1608
R444	1-216-848-11	s	RESISTOR,CHIP 180K 1/16 (1608)
R445	1-218-231-11	s	RESISTOR, CHIP 1 1/2W (4532)
R446	1-216-810-11	s	RESISTOR, CHIP 120 1/16W 1608
R447	1-216-823-11	s	RESISTOR, CHIP 1.5K 1/16W
R448	1-216-837-11	s	RESISTOR,CHIP 22K 1/16W 1608
R449	1-216-838-11	s	RESISTOR CHIP 27K 1/16W(1608)
R450	1-216-827-11	s	RESISTOR, CHIP 3.3K 1/16W 1608
R451	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R452	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R453	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R454	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R455	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R456	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R457	1-216-827-11	s	RESISTOR, CHIP 3.3K 1/16W 1608
R458	1-216-841-11	s	RESISTOR, CHIP 47K 1/16W 1608
R459	1-216-837-11	s	RESISTOR,CHIP 22K 1/16W 1608
R460	1-216-840-11	s	RESISTOR,CHIP 39K 1/16W 1608
R461	1-216-849-11	s	RESISTOR,CHIP 220K 1/16W 1608
R462	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R463	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R464	1-216-829-11	s	RESISTOR,CHIP 4.7K 1/16W(1608)
R465	1-216-829-11	s	RESISTOR,CHIP 4.7K 1/16W(1608)
R466	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R467	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R468 *UC	1-218-880-11	s	RESISTOR,CHIP 24K 1/16W (1608)
*CE	1-218-881-11	s	RESISTOR, CHIP 27K 1/16W(1608)
R469	1-216-841-11	s	RESISTOR, CHIP 47K 1/16W 1608
R470	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R471	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R480	1-249-426-11	s	RES,CARBON 5.6K 1/4W (SMALL)
R490	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R492	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R493	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R501	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R502	1-216-857-11	s	RESISTOR,CHIP 1M 1/16W(1608)
R503	1-216-823-11	s	RESISTOR, CHIP 1.5K 1/16W
R504 *UC	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R505 *CE	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R506	1-216-819-11	s	RESISTOR,CHIP 680 1/16W 1608
R507	1-216-825-11	s	RESISTOR,CHIP 2.2K 1/16W 1608
R509	1-216-844-11	s	RESISTOR,CHIP 82K 1/16W 1608
R510	1-216-827-11	s	RESISTOR, CHIP 3.3K 1/16W 1608
R511	1-216-825-11	s	RESISTOR,CHIP 2.2K 1/16W 1608
R512	1-216-815-11	s	RESISTOR,CHIP 330 1/16W 1608
R513	1-216-841-11	s	RESISTOR, CHIP 47K 1/16W 1608
R514	1-216-809-11	s	RESISTOR,CHIP 100 1/16W 1608

(PS-616N2/PS-616P1 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R515	1-216-837-11	s	RESISTOR,CHIP 22K 1/16W 1608
R516	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R517	1-216-857-11	s	RESISTOR,CHIP 1M 1/16W(1608)
R518	1-216-825-11	s	RESISTOR,CHIP 2.2K 1/16W 1608
R519	1-216-825-11	s	RESISTOR,CHIP 2.2K 1/16W 1608
R520	1-216-829-11	s	RESISTOR,CHIP 4.7K 1/16W(1608)
R521	1-216-829-11	s	RESISTOR,CHIP 4.7K 1/16W(1608)
R522	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R523	1-216-811-11	s	RESISTOR, CHIP 150 1/16W(1608)
R524	1-216-829-11	s	RESISTOR,CHIP 4.7K 1/16W(1608)
R526	1-216-838-11	s	RESISTOR CHIP 27K 1/16W(1608)
R528	1-216-838-11	s	RESISTOR CHIP 27K 1/16W(1608)
R530	1-216-844-11	s	RESISTOR,CHIP 82K 1/16W 1608
R531	1-216-827-11	s	RESISTOR, CHIP 3.3K 1/16W 1608
R532	1-216-825-11	s	RESISTOR,CHIP 2.2K 1/16W 1608
R533	1-216-815-11	s	RESISTOR,CHIP 330 1/16W 1608
R534	1-216-809-11	s	RESISTOR,CHIP 100 1/16W 1608
R535	1-216-829-11	s	RESISTOR,CHIP 4.7K 1/16W(1608)
R536	1-216-827-11	s	RESISTOR, CHIP 3.3K 1/16W 1608
R537	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R538	1-216-827-11	s	RESISTOR, CHIP 3.3K 1/16W 1608
R539	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R540	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
X501 *UC	1-567-866-11	s	VIBRATOR,CRYSTAL (14.31818MHZ)
*CE	1-760-456-11	s	VIBRATOR, CRYSTAL (VCO)

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SW-1073 BOARD
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 Ref. No.
 or Q'ty  Part No.    SP Description

 1pc      A-8327-992-A s MOUNTED CIRCUIT BOARD, SW-1073

 D101     8-719-047-63 s LED TLG218P
 D102     8-719-047-63 s LED TLG218P
 D103     8-719-047-63 s LED TLG218P
 D104     8-719-047-63 s LED TLG218P

 R101     1-216-823-11 s RESISTOR, CHIP 1.5K 1/16W
 R102     1-216-823-11 s RESISTOR, CHIP 1.5K 1/16W
 R103     1-216-823-11 s RESISTOR, CHIP 1.5K 1/16W
 R104     1-216-823-11 s RESISTOR, CHIP 1.5K 1/16W
 R105     1-216-823-11 s RESISTOR, CHIP 1.5K 1/16W

 R106     1-216-823-11 s RESISTOR, CHIP 1.5K 1/16W
 R107     1-216-823-11 s RESISTOR, CHIP 1.5K 1/16W
 R108     1-216-823-11 s RESISTOR, CHIP 1.5K 1/16W

 S101     1-762-234-11 s SWITCH, SLIDE
 S102     1-762-234-11 s SWITCH, SLIDE
 S103     1-762-234-11 s SWITCH, SLIDE
 S104     1-762-234-11 s SWITCH, SLIDE
 S105     1-771-295-11 s SWITCH, SLIDE

 S106     1-771-295-11 s SWITCH, SLIDE
 S107     1-771-295-11 s SWITCH, SLIDE
 S108     1-771-295-11 s SWITCH, SLIDE
 S109     1-771-295-11 s SWITCH, SLIDE




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FRAME
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 *UC:YS-W270(UC)
 *CE:YS-W270P(CE)

 Ref. No.
 or Q'ty  Part No.    SP Description

 1pc
    *CE ⚠ 1-251-381-11 s INLET, AC 3P
    *UC ⚠ 1-526-954-11 s INLET,AC
 1pc    ⚠ 1-762-954-11 s SWITCH, POWER




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PACKING MATERIALS & SUPPLIED ACCESSORIES
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 *UC:YS-W270(UC)
 *CE:YS-W270P(CE)

 Ref. No.
 or Q'ty  Part No.    SP Description

 1pc
    *UC ⚠ 1-534-827-14 s CORD,POWER (3P)(UL/CSA)
    *CE ⚠ 1-782-929-21 s CORD, POWER SUPPLY (BS 3P)
 2pcs     4-391-010-12 s BRACKET (1U), RACK MOUNT
 1pc      4-391-032-01 o CUSHIN (FRONT)
 1pc      4-391-033-01 o CUSHION (REAR)
 4pcs     7-682-660-09 s SCREW +PS 4X6
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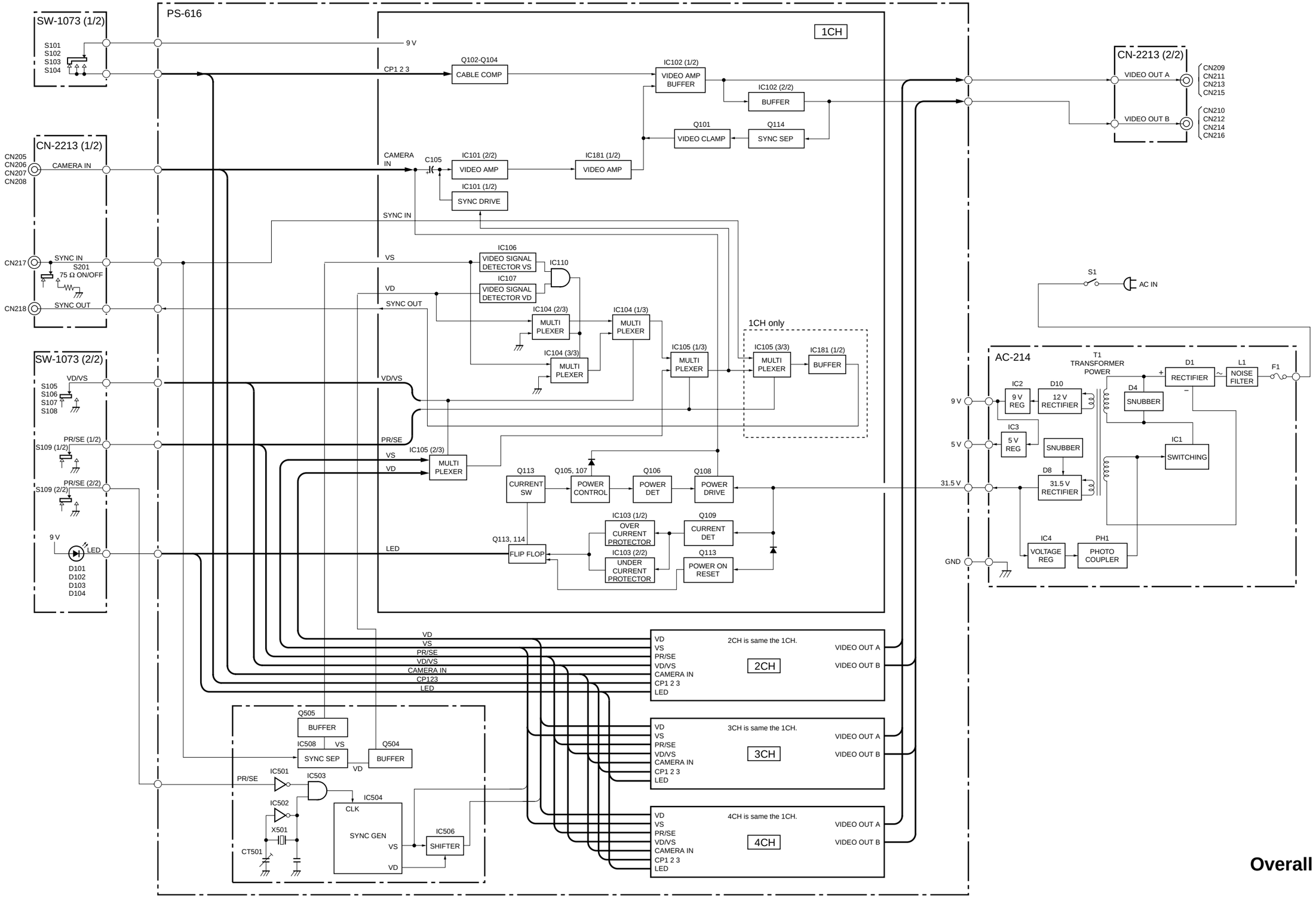
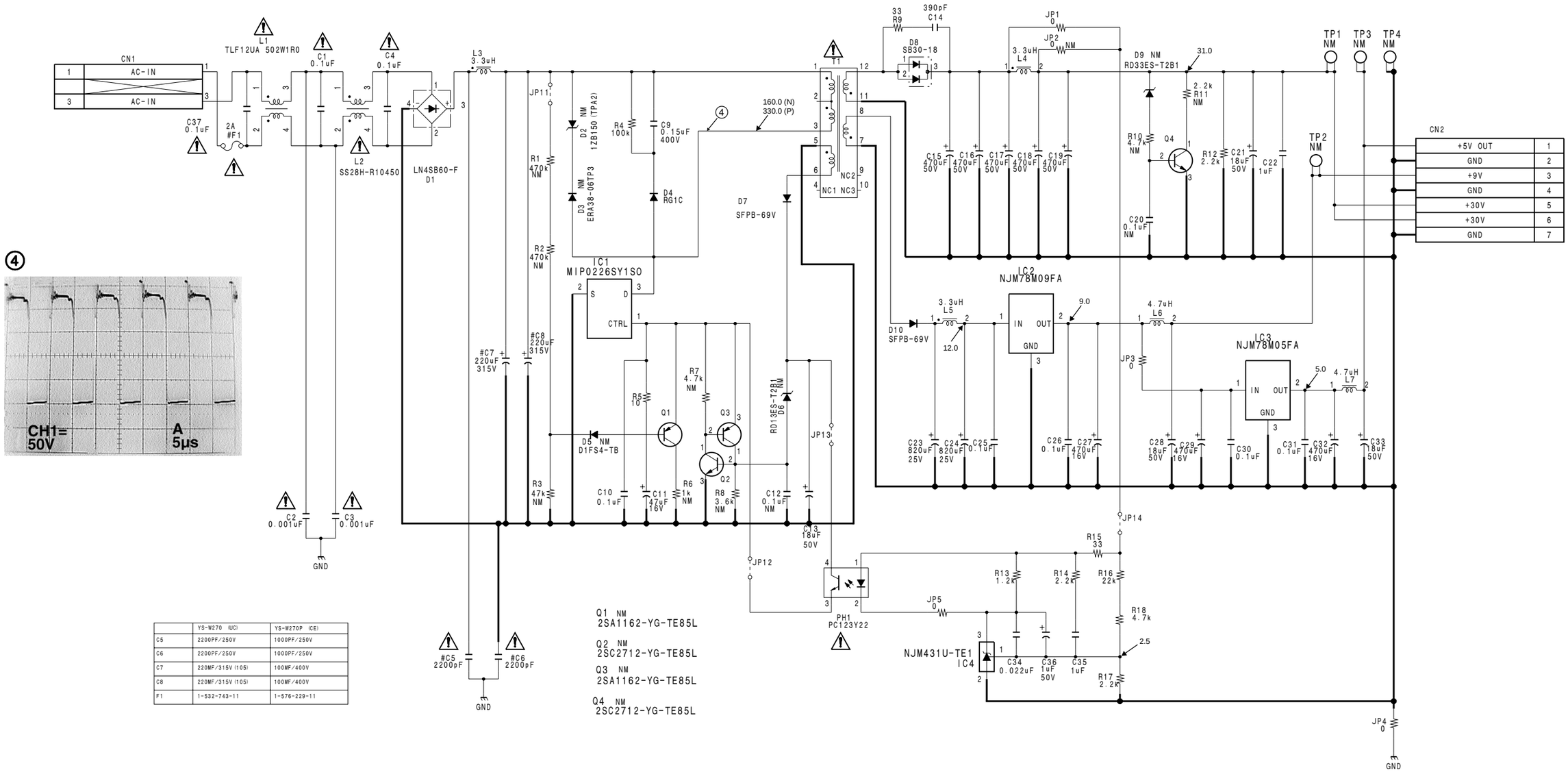
Section 7
Overall Block Diagram



Section 8
Schematic Diagrams and Board Layouts



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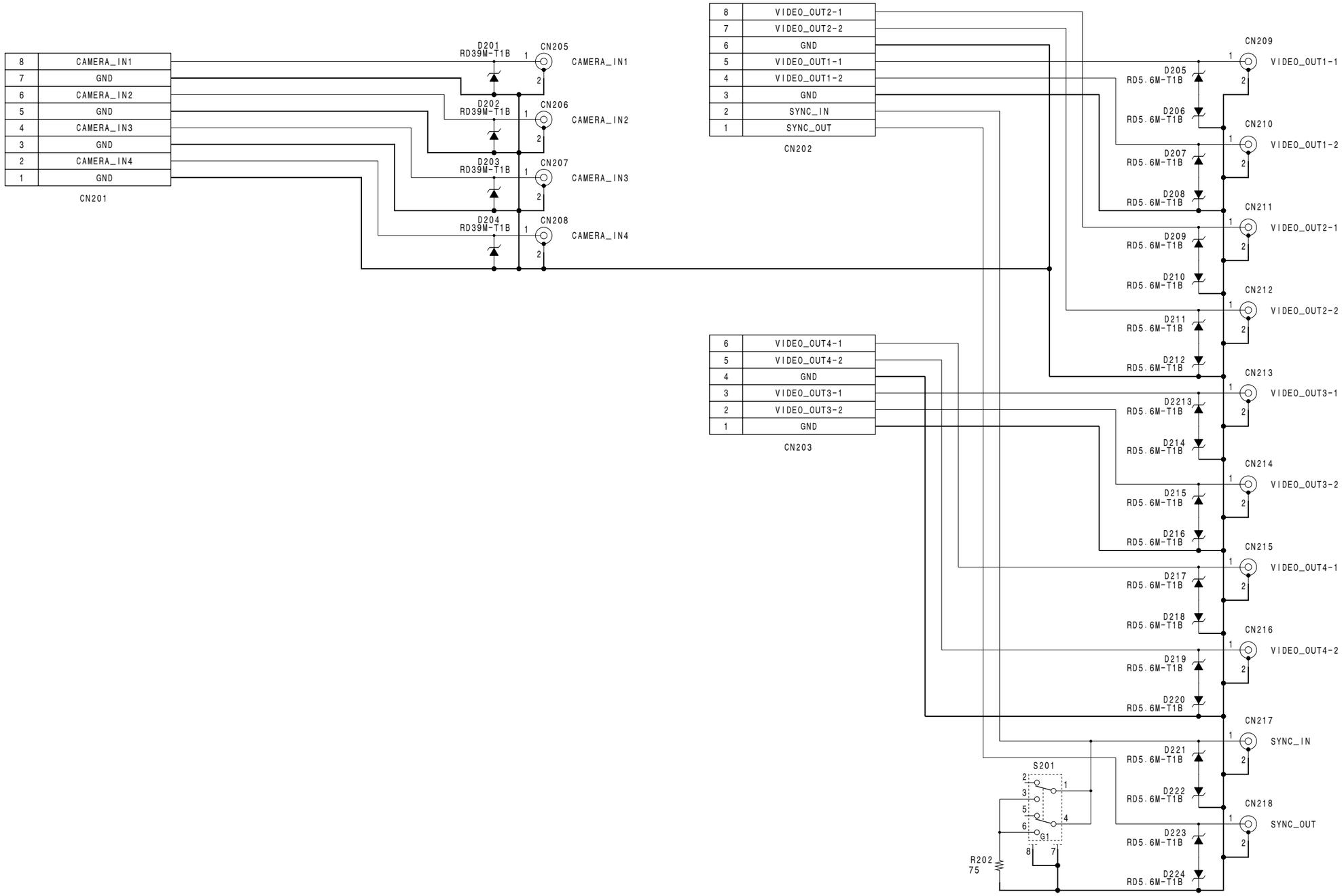
	YS-W270 (UC)	YS-W270P (CE)
C5	2200PF/250V	1000PF/250V
C6	2200PF/250V	1000PF/250V
C7	220MF/315V (105)	100MF/400V
C8	220MF/315V (105)	100MF/400V
F1	1-532-743-11	1-576-229-11

AC-214


8 CAMERA_IN1
7 GND
6 CAMERA_IN2
5 GND
4 CAMERA_IN3
3 GND
2 CAMERA_IN4
1 GND
CN201
D201 RD39M-T1B
D202 RD39M-T1B
D203 RD39M-T1B
D204 RD39M-T1B
CN205
CN206
CN207
CN208
CAMERA_IN1
CAMERA_IN2
CAMERA_IN3
CAMERA_IN4
8 VIDEO_OUT2-1
7 VIDEO_OUT2-2
6 GND
5 VIDEO_OUT1-1
4 VIDEO_OUT1-2
3 GND
2 SYNC_IN
1 SYNC_OUT
CN202
6 VIDEO_OUT4-1
5 VIDEO_OUT4-2
4 GND
3 VIDEO_OUT3-1
2 VIDEO_OUT3-2
1 GND
CN203
S201
R202 75
CN209
CN210
CN211
CN212
CN213
CN214
CN215
CN216
CN217
CN218
VIDEO_OUT1-1
VIDEO_OUT1-2
VIDEO_OUT2-1
VIDEO_OUT2-2
VIDEO_OUT3-1
VIDEO_OUT3-2
VIDEO_OUT4-1
VIDEO_OUT4-2
SYNC_IN
SYNC_OUT
D205 RD5.6M-T1B
D206 RD5.6M-T1B
D207 RD5.6M-T1B
D208 RD5.6M-T1B
D209 RD5.6M-T1B
D210 RD5.6M-T1B
D211 RD5.6M-T1B
D212 RD5.6M-T1B
D2213 RD5.6M-T1B
D214 RD5.6M-T1B
D215 RD5.6M-T1B
D216 RD5.6M-T1B
D217 RD5.6M-T1B
D218 RD5.6M-T1B
D219 RD5.6M-T1B
D220 RD5.6M-T1B
D221 RD5.6M-T1B
D222 RD5.6M-T1B
D223 RD5.6M-T1B
D224 RD5.6M-T1B

CN-2213

PS-616 (1/5)

IC101 TK15420MTL IC181 TK15420MTL D102 1SS193-TE85L Q181 2SC1623-T1L6
IC102 TK15420MTL Q182 2SC1623-T1L6

Q101 2SC1623-T1L6 Q103 2SC1623-T1L6
Q102 2SC1623-T1L6 Q104 2SC1623-T1L6

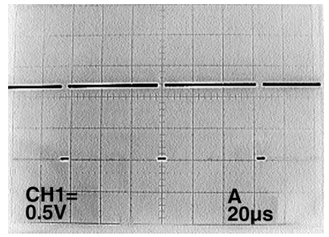
005 VIDEO_OUT1-2
005 VIDEO_OUT1-1
9V
002. 003. 004. 005

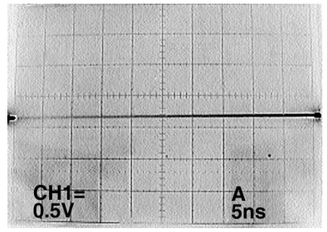
005 CP1
005 CAMERA_IN1
005 LED1
005 AUDIO_OUT1
30.5V
002. 003. 004. 005

002. 003. 004. 005 VS_SEL
002. 003. 004. 005 VD_SEL
005 SYNC_IN
002. 003. 004. 005 5V
002. 003. 004. 005 GND
002. 003. 004. 005 PR/SE2
005 VD/VS1

EXT_VD 002. 003. 004. 005
EXT_VS 002. 003. 004. 005
INT_VD 002. 003. 004. 005
INT_VS 002. 003. 004. 005
SYNC_OUT 005

	YS-W270 (UC)	YS-W270P (CE)
R168	24K 1/16W (1608)	27K 1/16W (1608)





Q115 2SC1623-T1L6 IC108 TC7SU04F (TE85R) IC106 NJM2230M (TE2) IC110 TC7S08F (TE85R) IC104 TC74HC4053AF (EL)
Q116 2SC1623-T1L6 IC109 TC7SU04F (TE85R) IC107 NJM2230M (TE2) IC105 TC74HC4053AF (EL)

Q105 2SC1623-T1L6
Q106 2SA812-T1M6
Q107 2SC1623-T1L6
Q108 2SA1220A-Q
Q109 2SA812-T1M6
Q110 DTC114EKA-T146
Q111 2SC1623-T1L6
Q112 2SC1623-T1L6
Q113 2SC1623-T1L6
Q114 2SA812-T1M6

PS-616 (1/5)

PS-616 (2/5)

IC201 TK15420MTL IC281 TK15420MTL D202 1SS193-TE85L Q281 2SC1623-T1L6 Q201 2SC1623-T1L6 Q203 2SC1623-T1L6
IC202 TK15420MTL Q282 2SC1623-T1L6 Q202 2SC1623-T1L6 Q204 2SC1623-T1L6

005 VIDEO_OUT2-2
005 VIDEO_OUT2-1
9V
001, 003, 004, 005

005 CP2
005 CAMERA_IN2
005 LED2
005 AUDIO_OUT2
30.5V
001, 003, 004, 005

IC203 UPC393G2-E2

Q205 2SC1623-T1L6
Q206 2SA812-T1M6
Q207 2SC1623-T1L6
Q208 2SA1220A-Q
Q209 2SA812-T1M6
Q210 DTC114EKA-T146
Q211 2SC1623-T1L6
Q212 2SC1623-T1L6
Q213 2SC1623-T1L6
Q214 2SA812-T1M6

001, 003, 004, 005
VS_SEL
VD_SEL
001, 003, 004, 005

5V
001, 003, 004, 005

GND
001, 003, 004, 005

001, 003, 004, 005
PR/SE2
005 VD/VS2

EXT_VD 001, 003, 004, 005
EXT_VS 001, 003, 004, 005
INT_VD 001, 003, 004, 005
INT_VS 001, 003, 004, 005

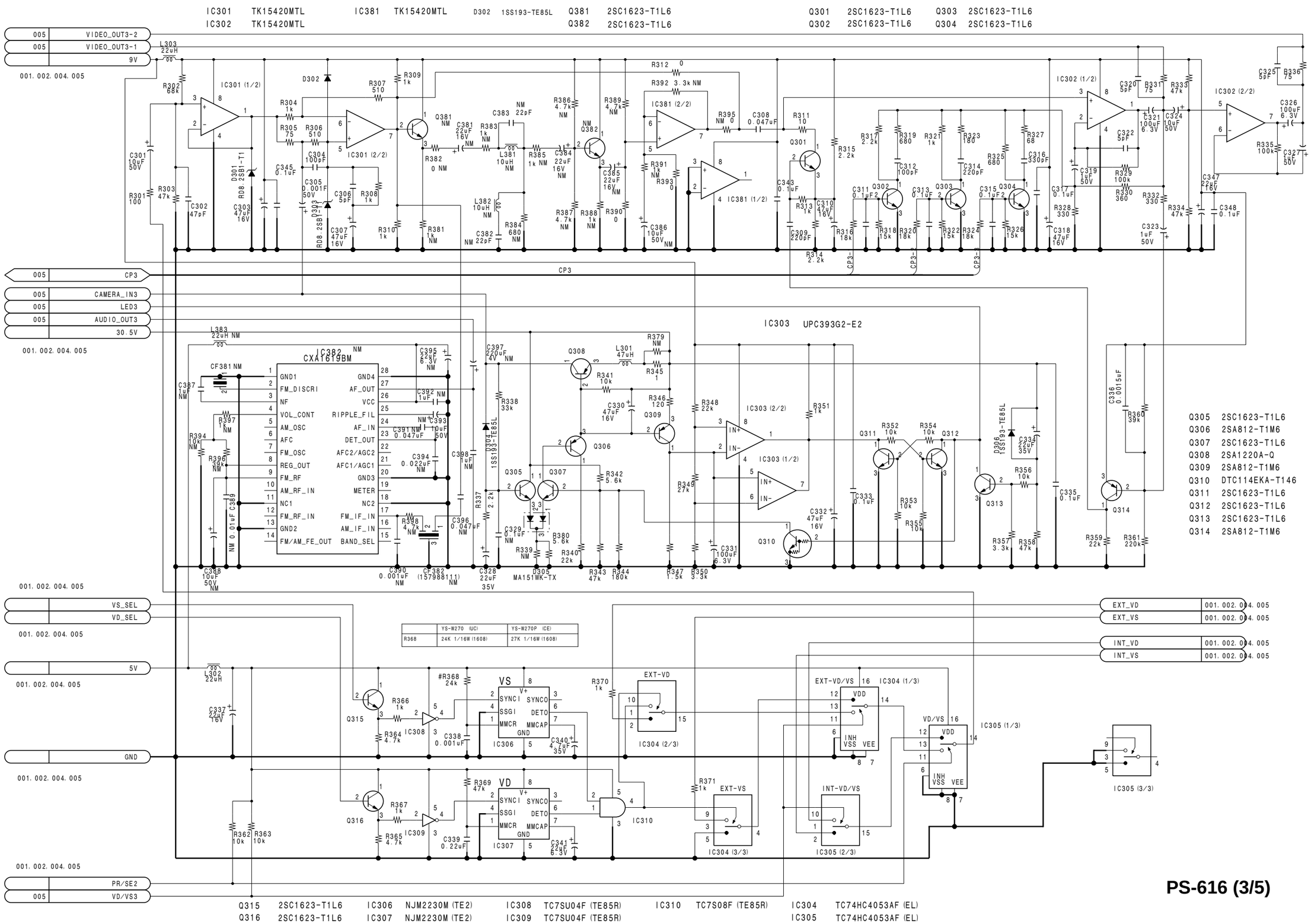
	YS-W270 (UC)	YS-W270P (CE)
R268	24K 1/16W (1608)	27K 1/16W (1608)

Q215 2SC1623-T1L6 IC208 TC7SU04F (TE85R) IC206 NJM2230M (TE2) IC210 TC7S08F (TE85R) IC204 TC74HC4053AF (EL)
Q216 2SC1623-T1L6 IC209 TC7SU04F (TE85R) IC207 NJM2230M (TE2) IC205 TC74HC4053AF (EL)

PS-616 (2/5)

8-4

http://getMANUAL.com



PS-616 (3/5)

PS-616 (4/5)

IC401 TK15420MTL IC481 TK15420MTL D402 1SS193-TE85L Q481 2SC1623-T1L6 Q401 2SC1623-T1L6 Q403 2SC1623-T1L6
IC402 TK15420MTL Q482 2SC1623-T1L6 Q402 2SC1623-T1L6 Q404 2SC1623-T1L6

005 VIDEO_OUT4-2
005 VIDEO_OUT4-1
9V
001. 002. 003. 005

005 CP4
005 CAMERA_IN4
005 LED4
005 AUDIO_OUT4
30.5V
001. 002. 003. 005

IC403 UPC393G2-E2

Q405 2SC1623-T1L6
Q406 2SA812-T1M6
Q407 2SC1623-T1L6
Q408 2SA1220A-Q
Q409 2SA812-T1M6
Q410 DTC114EKA-T146
Q411 2SC1623-T1L6
Q412 2SC1623-T1L6
Q413 2SC1623-T1L6
Q414 2SA812-T1M6

001. 002. 003. 005
VS_SEL
VD_SEL
001. 002. 003. 005
5V
001. 002. 003. 005
GND
001. 002. 003. 005
PR/SE2
005 VD/VS4

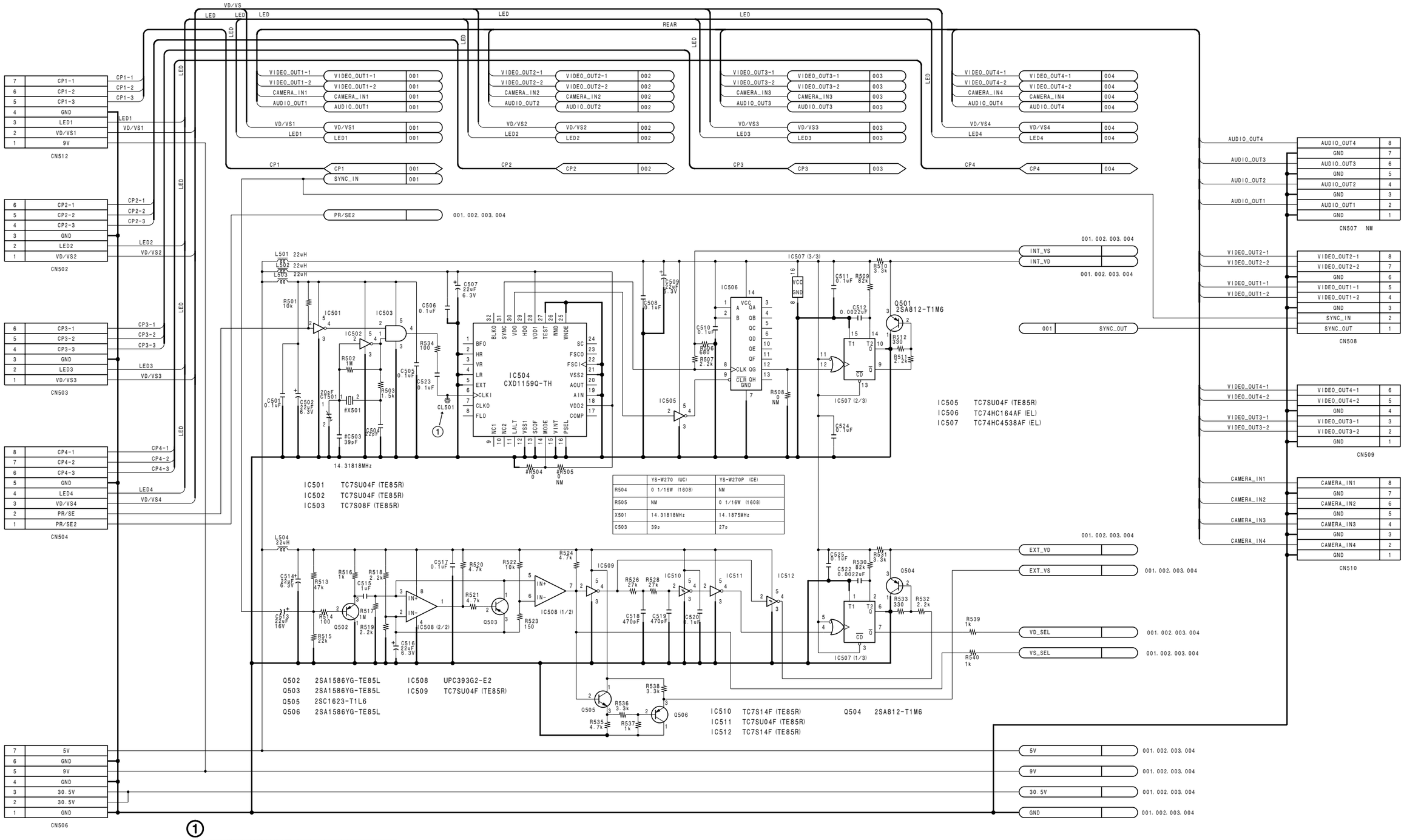
EXT_VD 001. 002. 003. 005
EXT_VS 001. 002. 003. 005
INT_VD 001. 002. 003. 005
INT_VS 001. 002. 003. 005

	YS-W270 (UC)	YS-W270P (CE)
R468	24K 1/16W (1608)	27K 1/16W (1608)

Q415 2SC1623-T1L6 IC406 NJM2230M (TE2) IC408 TC7SU04F (TE85R) IC410 TC7S08F (TE85R) IC404 TC74HC4053AF (EL)
Q416 2SC1623-T1L6 IC407 NJM2230M (TE2) IC409 TC7SU04F (TE85R) IC405 TC74HC4053AF (EL)

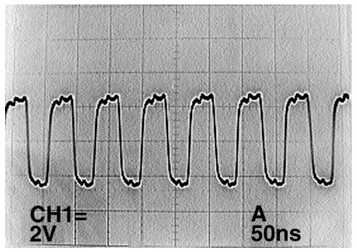
PS-616 (4/5)

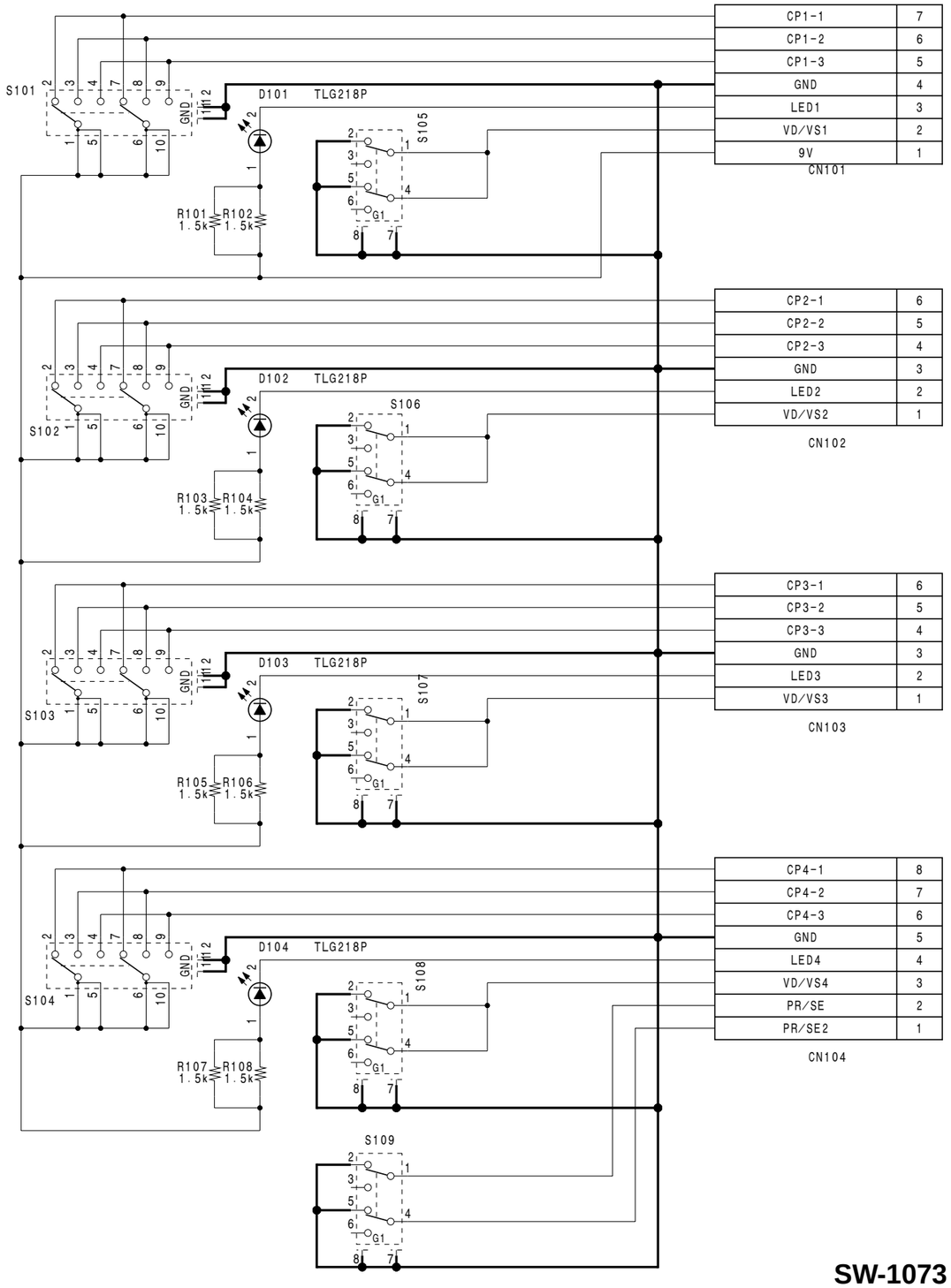
PS-616 (5/5)　PS-615 (5/5)



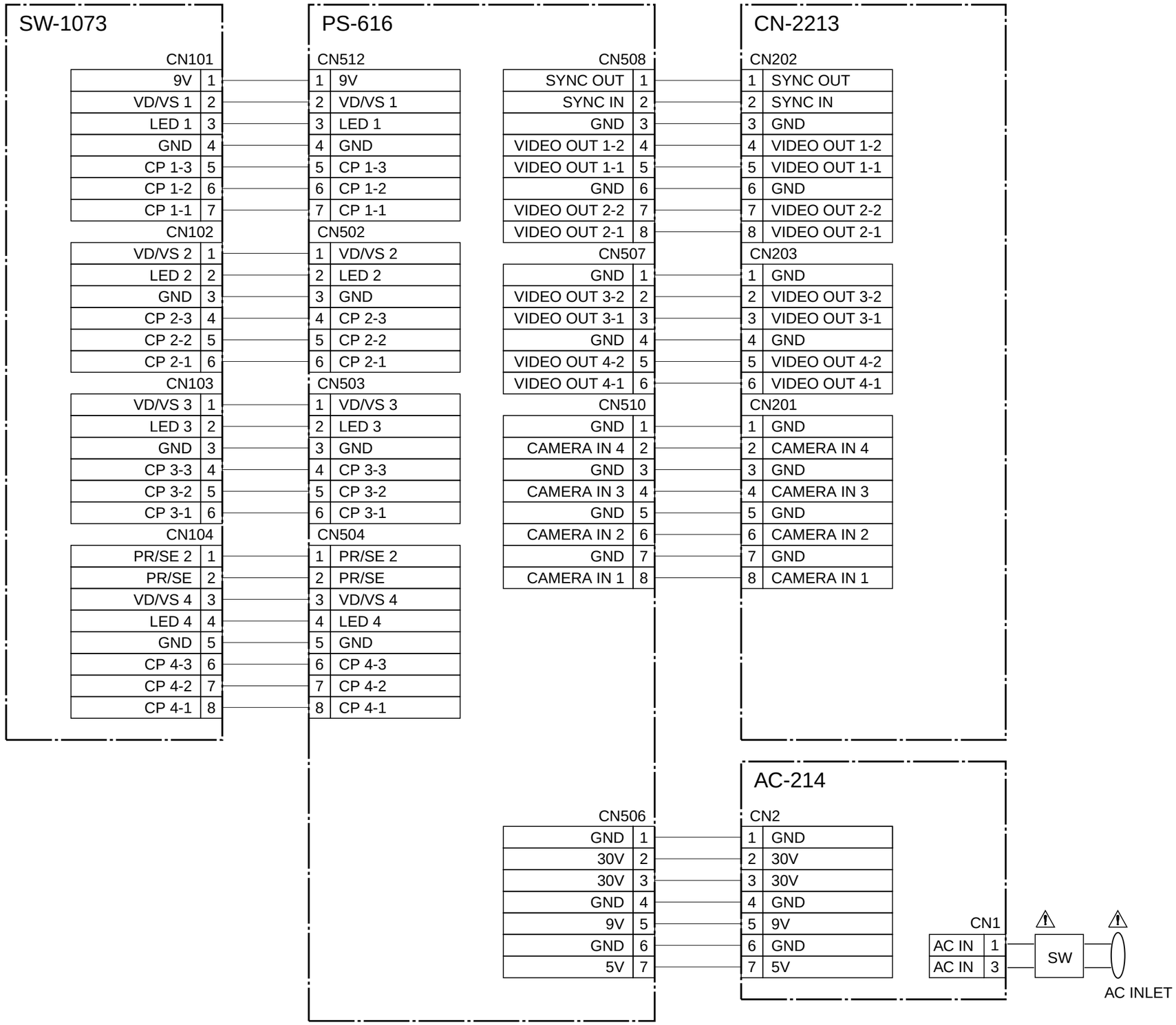
	YS-W270 (UC)	YS-W270P (CE)
R504	0 1/16W (1608)	NM
R505	NM	0 1/16W (1608)
X501	14.31818MHz	14.1875MHz
C503	39p	27p

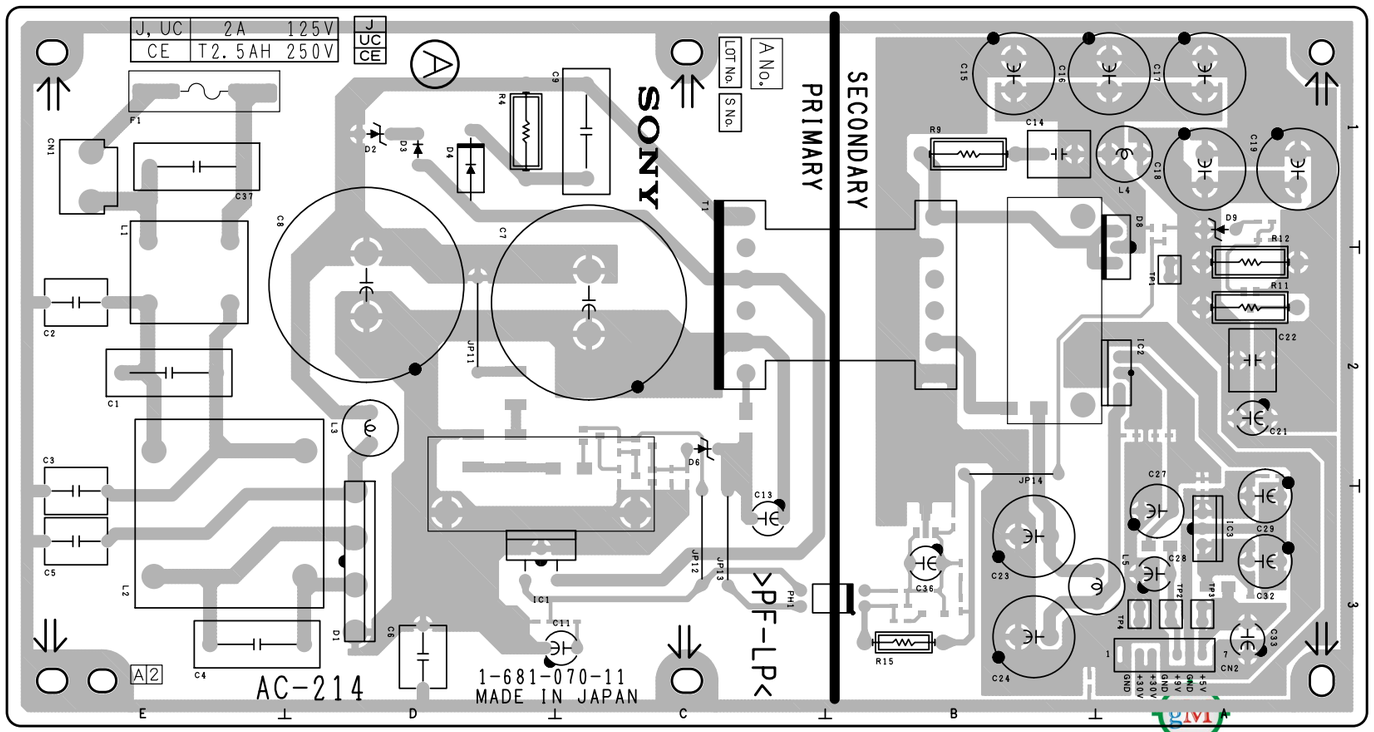
①



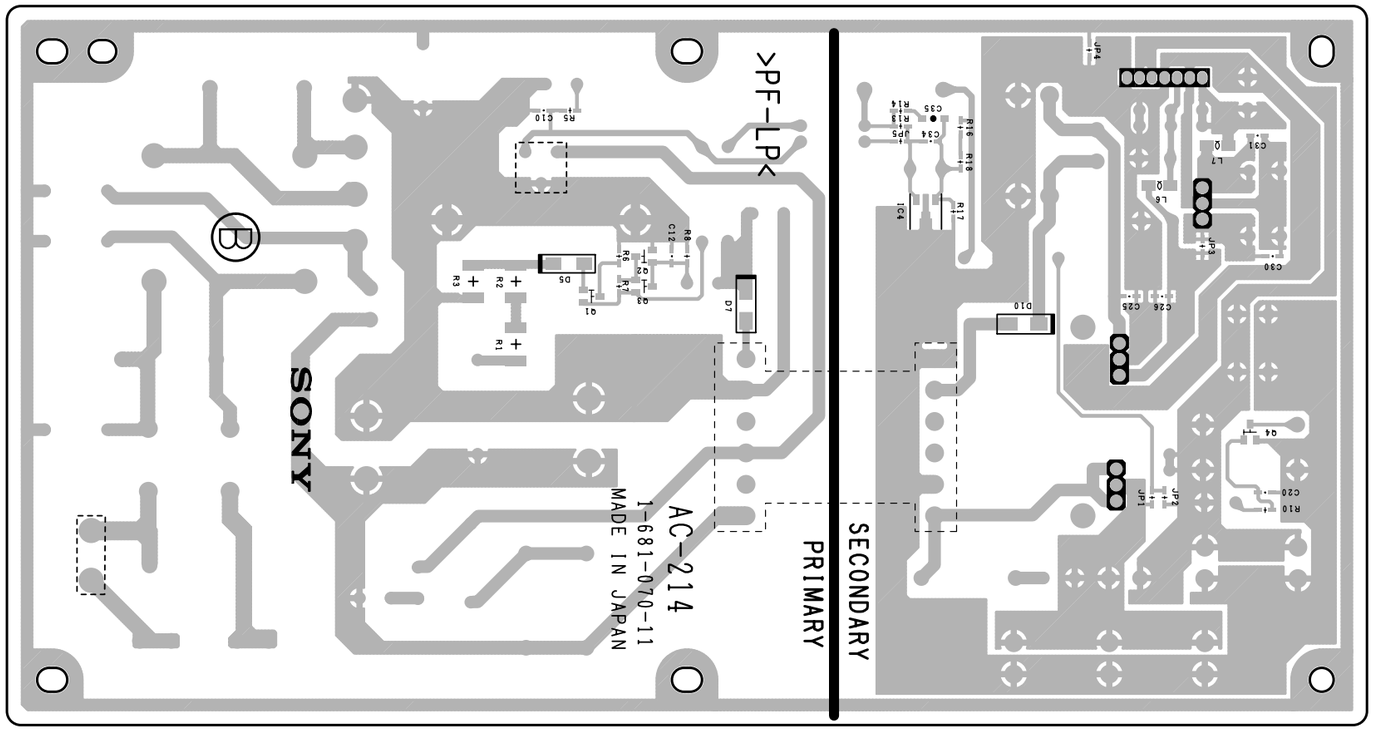

S101
D101 TLG218P
S105
R101 1.5k
R102 1.5k
CP1-1 7
CP1-2 6
CP1-3 5
GND 4
LED1 3
VD/VS1 2
9V 1
CN101
S102
D102 TLG218P
S106
R103 1.5k
R104 1.5k
CP2-1 6
CP2-2 5
CP2-3 4
GND 3
LED2 2
VD/VS2 1
CN102
S103
D103 TLG218P
S107
R105 1.5k
R106 1.5k
CP3-1 6
CP3-2 5
CP3-3 4
GND 3
LED3 2
VD/VS3 1
CN103
S104
D104 TLG218P
S108
R107 1.5k
R108 1.5k
CP4-1 8
CP4-2 7
CP4-3 6
GND 5
LED4 4
VD/VS4 3
PR/SE 2
PR/SE2 1
CN104
S109

SW-1073


SW-1073
CN101
9V 1
VD/VS 1 2
LED 1 3
GND 4
CP 1-3 5
CP 1-2 6
CP 1-1 7
CN102
VD/VS 2 1
LED 2 2
GND 3
CP 2-3 4
CP 2-2 5
CP 2-1 6
CN103
VD/VS 3 1
LED 3 2
GND 3
CP 3-3 4
CP 3-2 5
CP 3-1 6
CN104
PR/SE 2 1
PR/SE 2
VD/VS 4 3
LED 4 4
GND 5
CP 4-3 6
CP 4-2 7
CP 4-1 8
PS-616
CN512
1 9V
2 VD/VS 1
3 LED 1
4 GND
5 CP 1-3
6 CP 1-2
7 CP 1-1
CN502
1 VD/VS 2
2 LED 2
3 GND
4 CP 2-3
5 CP 2-2
6 CP 2-1
CN503
1 VD/VS 3
2 LED 3
3 GND
4 CP 3-3
5 CP 3-2
6 CP 3-1
CN504
1 PR/SE 2
2 PR/SE
3 VD/VS 4
4 LED 4
5 GND
6 CP 4-3
7 CP 4-2
8 CP 4-1
CN508
SYNC OUT 1
SYNC IN 2
GND 3
VIDEO OUT 1-2 4
VIDEO OUT 1-1 5
GND 6
VIDEO OUT 2-2 7
VIDEO OUT 2-1 8
CN507
GND 1
VIDEO OUT 3-2 2
VIDEO OUT 3-1 3
GND 4
VIDEO OUT 4-2 5
VIDEO OUT 4-1 6
CN510
GND 1
CAMERA IN 4 2
GND 3
CAMERA IN 3 4
GND 5
CAMERA IN 2 6
GND 7
CAMERA IN 1 8
CN506
GND 1
30V 2
30V 3
GND 4
9V 5
GND 6
5V 7
CN-2213
CN202
1 SYNC OUT
2 SYNC IN
3 GND
4 VIDEO OUT 1-2
5 VIDEO OUT 1-1
6 GND
7 VIDEO OUT 2-2
8 VIDEO OUT 2-1
CN203
1 GND
2 VIDEO OUT 3-2
3 VIDEO OUT 3-1
4 GND
5 VIDEO OUT 4-2
6 VIDEO OUT 4-1
CN201
1 GND
2 CAMERA IN 4
3 GND
4 CAMERA IN 3
5 GND
6 CAMERA IN 2
7 GND
8 CAMERA IN 1
AC-214
CN2
1 GND
2 30V
3 30V
4 GND
5 9V
6 GND
7 5V
CN1
AC IN 1
AC IN 3
SW
AC INLET



AC-214 -A SIDE-
SUFFIX: -11

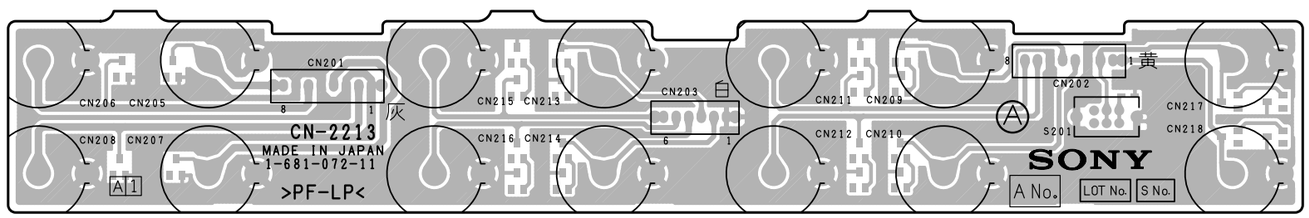


AC-214 -B SIDE-
SUFFIX: -11

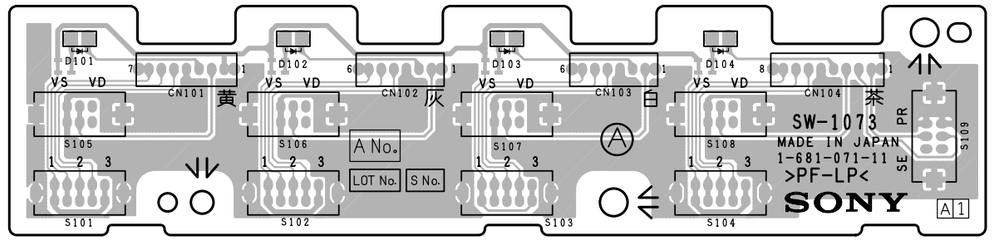
AC-214 (1-681-070-11)

*:B SIDE

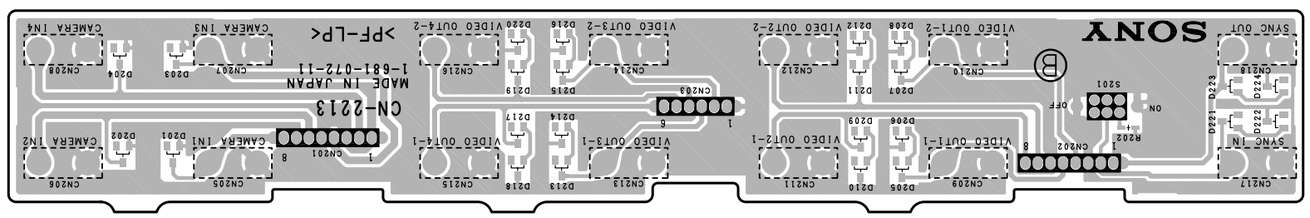
C1	E2	R8	*C2
C2	E2	R9	B1
C3	E3	R10	*A1
C4	E3	R11	A2
C5	E3	R12	A2
C6	D3	R13	*B3
C7	C2	R14	*B3
C8	D2	R15	B3
C9	C1	R16	*B3
C10	*D3	R17	*B3
C11	C3	R18	*B3
C12	*C2		
C13	C3	T1	B2
C14	B1		
C15	B1	TP1	A2
C16	A1	TP2	A3
C17	A1	TP3	A3
C18	A1	TP4	A3
C19	A1		
C20	*A1		
C21	A2		
C22	A2		
C23	B3		
C24	B3		
C25	*A2		
C26	*A2		
C27	A3		
C28	A3		
C29	A3		
C30	*A2		
C31	*A3		
C32	A3		
C33	A3		
C34	*B3		
C35	*B3		
C36	B3		
C37	E1		
CN1	E1		
CN2	A3		
D1	D3		
D2	D1		
D3	D1		
D4	D1		
D5	*C2		
D6	C2		
D7	*C2		
D8	A1		
D9	A1		
D10	*B2		
F1	E1		
IC1	D3		
IC2	A2		
IC3	A3		
IC4	*B3		
JP1	*A1		
JP2	*A1		
JP3	*A2		
JP4	*B3		
JP5	*B3		
JP11	D2		
JP12	C3		
JP13	C3		
JP14	B2		
L1	E2		
L2	E3		
L3	D2		
L4	A1		
L5	A3		
L6	*A3		
L7	*A3		
PH1	B3		
Q1	*C2		
Q2	*C2		
Q3	*C2		
Q4	*A2		
R1	*D2		
R2	*D2		
R3	*D2		
R4	D1		
R5	*C3		
R6	*C2		
R7	*C2		



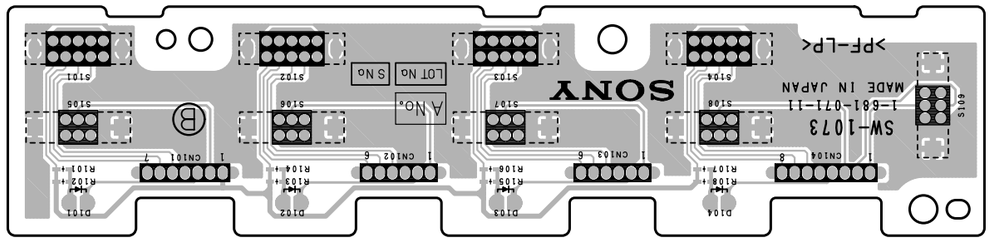
CN-2213 -A SIDE-
SUFFIX: -11



SW-1073 -A SIDE-
SUFFIX: -11



CN-2213 -B SIDE-
SUFFIX: -11



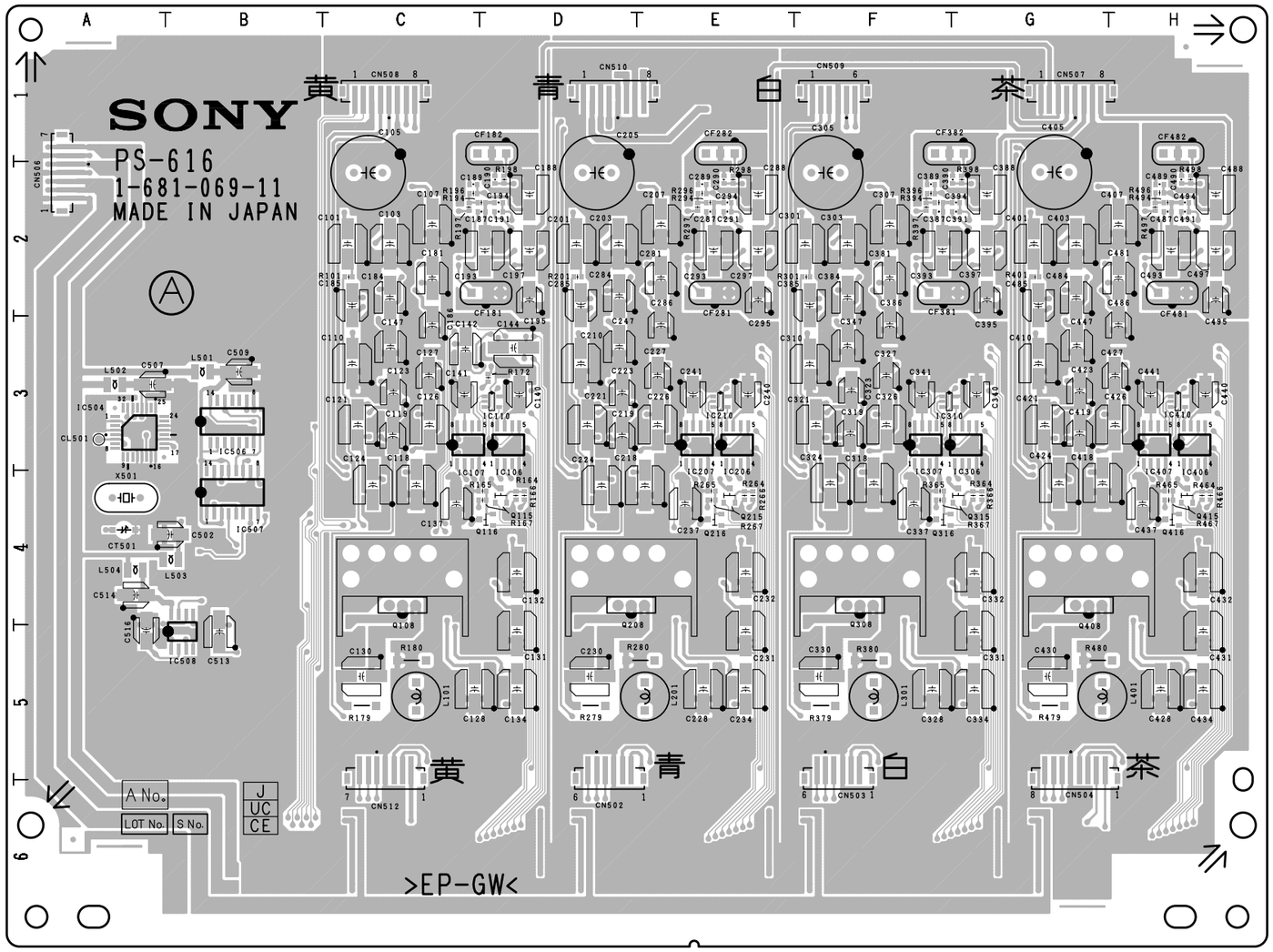
SW-1073 -B SIDE-
SUFFIX: -11

PS-616 (1-681-069-11)

*:B SIDE

C101	C2	C225	*D3	C386	F3	C514	A4	IC306	G3	Q211	*E4	R139	*C5	R229	*D3	R327	*F5	R425	*G5	R523	*A5
C102	*C2	C226	E3	C387	F2	C515	*B5	IC307	F3	Q212	*E4	R140	*D4	R230	*D3	R328	*F3	R426	*G5	R524	*B4
C103	C2	C227	E3	C388	G2	C516	A5	IC308	*G4	Q213	*E5	R141	*C4	R231	*D3	R329	*F3	R427	*G5	R526	*B4
C104	*C2	C228	E5	C389	F2	C517	*B4	IC309	*F4	Q214	*D3	R142	*C5	R232	*D3	R330	*F3	R428	*G3	R528	*B4
C105	C2	C229	*E5	C390	G2	C518	*B4	IC310	F3	Q215	E4	R143	*D5	R233	*E3	R331	*F3	R429	*G3	R530	*B4
C106	*C2	C230	D5	C391	G2	C519	*B4	IC381	*F3	Q216	E4	R144	*D5	R234	*E3	R332	*F3	R430	*G3	R531	*B4
C107	C2	C231	E5	C392	*G2	C520	*B4	IC382	*F2	Q281	*E2	R145	*C5	R235	*E3	R333	*F3	R431	*G3	R532	*B4
C108	*C3	C232	E4	C393	F2	C522	*B4	IC401	*G2	Q282	*D2	R146	*C5	R236	*D3	R334	*F3	R432	*G3	R533	*B4
C109	*C3	C233	*E4	C394	G2	C523	*A3	IC402	*G3	Q301	*F3	R147	*C4	R237	*E5	R335	*F3	R433	*H3	R534	*A3
C110	C3	C234	E5	C395	G2	C524	*B4	IC403	*H4	Q302	*F5	R148	*C4	R238	*D5	R336	*F3	R434	*H3	R535	*B4
C111	*C6	C235	*E5	C396	*F2	C525	*B4	IC404	*H3	Q303	*F5	R149	*C4	R239	*E5	R337	*F5	R435	*H3	R536	*B5
C112	*C5	C236	*D3	C397	G2			IC405	*H3	Q304	*F5	R150	*D4	R240	*E4	R338	*F5	R436	*G3	R537	*B5
C113	*C6	C237	E4	C398	*G2	CF181	D2	IC406	H3	Q305	*F5	R151	*D4	R241	*E4	R339	*F5	R437	*G5	R538	*B5
C114	*C5	C238	*E4	C401	G2	CF182	D1	IC407	H3	Q306	*G5	R152	*D4	R242	*E5	R340	*G4	R438	*G5	R539	*B4
C115	*C6	C239	*E4	C402	*G2	CF281	E2	IC408	*H4	Q307	*F5	R153	*D4	R243	*E5	R341	*F4	R439	*H5	R540	*B4
C116	*C5	C240	E3	C403	G2	CF282	E1	IC409	*H4	Q308	F4	R154	*D4	R244	*E5	R342	*F5	R440	*H4		
C117	*C4	C241	E3	C404	*G2	CF381	F2	IC410	H3	Q309	*F5	R155	*D4	R245	*D5	R343	*G5	R441	*H4	X501	A4
C118	C4	C243	*D3	C405	G2	CF382	F1	IC481	*H3	Q310	*G5	R156	*D5	R246	*E5	R344	*G5	R442	*H5		
C119	C3	C245	*D2	C406	*G2	CF481	H2	IC482	*H2	Q311	*G4	R157	*D5	R247	*E4	R345	*F5	R443	*H5		
C120	*C3	C247	D3	C407	H2	CF482	H1	IC501	*B4	Q312	*G4	R158	*D5	R248	*E4	R346	*F5	R444	*H5		
C121	C3	C248	*D3	C408	*G3			IC502	*A3	Q313	*G5	R159	*C3	R249	*E4	R347	*F4	R445	*G5		
C122	*C3	C281	E2	C409	*G3	CL501	A3	IC503	*A3	Q314	*F3	R160	*C3	R250	*E4	R348	*F4	R446	*H5		
C123	C3	C282	*D2	C410	G3			IC504	A3	Q315	G4	R161	*C3	R251	*E4	R349	*F4	R447	*H4		
C124	C4	C283	*D2	C411	*G6	CN502	D5	IC505	*B3	Q316	F4	R162	*D3	R252	*E4	R350	*F4	R448	*H4		
C125	*C3	C284	D2	C412	*G5	CN503	F5	IC506	B3	Q381	*F2	R163	*D3	R253	*E4	R351	*G4	R449	*H4		
C126	C3	C285	D2	C413	*G6	CN504	G5	IC507	B4	Q382	*F2	R164	D4	R254	*E4	R352	*G4	R450	*H4		
C127	C3	C286	E3	C414	*G5	CN506	A2	IC508	B5	Q401	*G3	R165	D4	R255	*E4	R353	*G4	R451	*H4		
C128	C5	C287	E2	C415	*G6	CN507	G1	IC509	*B4	Q402	*G5	R166	D4	R256	*E5	R354	*G4	R452	*H4		
C129	*C5	C288	E2	C416	*G5	CN508	C1	IC510	*B4	Q403	*G5	R167	D4	R257	*E5	R355	*G4	R453	*H4		
C130	C5	C289	E2	C417	*G4	CN509	F1	IC511	*B4	Q404	*G5	R168	*D4	R258	*E5	R356	*G5	R454	*H4		
C131	D5	C290	E2	C418	G4	CN510	D1	IC512	*B4	Q405	*H5	R169	*C4	R259	*D3	R357	*G5	R455	*H4		
C132	D4	C291	E2	C419	G3	CN512	C5			Q406	*H5	R170	*D3	R260	*D3	R358	*G5	R456	*H5		
C133	*D4	C292	*E2	C420	*G3			L101	C5	Q407	*H5	R171	*D3	R261	*D3	R359	*F3	R457	*H5		
C134	D5	C293	E2	C421	G3	CT501	A4	L102	*D4	Q408	G4	R172	D3	R262	*E3	R360	*F3	R458	*H5		
C135	*C5	C294	E2	C422	*G3			L104	*C4	Q409	*H5	R173	*D3	R263	*E3	R361	*F3	R459	*G3		
C136	*C3	C295	E2	C423	G3	D101	*C2	L181	*C2	Q410	*H5	R174	*C3	R264	E4	R362	*G3	R460	*G3		
C137	C4	C296	*E2	C424	G4	D102	*C2	L182	*C2	Q411	*H4	R175	*C3	R265	E4	R363	*G3	R461	*G3		
C138	*D4	C297	E2	C425	*G3	D103	*C2	L183	*D2	Q412	*H4	R176	*C3	R266	E4	R364	G4	R462	*H3		
C139	*C4	C298	*E2	C426	H3	D104	*C5	L201	E5	Q413	*H5	R177	*D3	R267	E4	R365	F4	R463	*H3		
C140	D3	C301	F2	C427	H3	D105	*C5	L202	*E4	Q414	*G3	R178	*D3	R268	*E4	R366	G4	R464	H4		
C141	C3	C302	*F2	C428	H5	D106	*D5	L203	*D4	Q415	H4	R179	C5	R269	*E4	R367	F4	R465	H4		
C142	C3	C303	F2	C429	*H5	D201	*D2	L281	*D2	Q416	H4	R180	C5	R270	*E3	R368	*G4	R466	H4		
C143	*C3	C304	*F2	C430	G5	D202	*E2	L282	*D2	Q481	*H2	R181	*C2	R271	*E3	R369	*F4	R467	H4		
C144	D3	C305	F2	C431	H5	D203	*E2	L283	*E2	Q482	*G2	R182	*C2	R279	D5	R370	*G3	R468	*H4		
C145	*C2	C306	*F2	C432	H4	D204	*D5	L301	F5	Q501	*B3	R183	*C2	R280	E5	R371	*G3	R469	*H4		
C147	C3	C307	F2	C433	*H4	D205	*E5	L302	*F4	Q502	*B5	R184	*C2	R281	*E2	R379	F5	R470	*H3		
C148	*C3	C308	*F3	C434	H5	D206	*E5	L303	*F4	Q503	*B4	R185	*C2	R282	*E2	R380	F5	R471	*H3		
C181	C2	C309	*F3	C435	*H5	D301	*F2	L381	*F2	Q504	*B4	R186	*C2	R283	*E2	R381	*F2	R479	G5		
C182	*C2	C310	F3	C436	*G3	D302	*F2	L382	*F2	Q505	*B4	R187	*C2	R284	*D2	R382	*F2	R480	G5		
C183	*C2	C311	*F6	C437	H4	D303	*F2	L383	*G2	Q506	*B5	R188	*C2	R285	*D2	R383	*F2	R481	*G2		
C184	C2	C312	*F5	C438	*H4	D304	*F5	L401	G5			R189	*C2	R286	*D2	R384	*F2	R482	*G2		
C185	C2	C313	*F6	C439	*H4	D305	*F5	L402	*H4	R101	C2	R190	*C2	R287	*D2	R385	*F2	R483	*G2		
C186	C3	C314	*F5	C440	H3	D306	*G5	L403	*G4	R102	*C2	R191	*C2	R288	*D2	R386	*F2	R484	*G2		
C187	D2	C315	*F6	C441	H3	D401	*G2	L481	*G2	R103	*C2	R192	*C2	R289	*D2	R387	*F2	R485	*G2		
C188	D2	C316	*F5	C443	*G3	D402	*H2	L482	*G2	R104	*C2	R193	*C2	R290	*D2	R388	*F2	R486	*G2		
C189	C2	C317	*F4	C445	*G2	D403	*G2	L483	*H2	R105	*C2	R194	D2	R291	*D2	R389	*F2	R487	*G2		
C190	D2	C318	F4	C447	G3	D404	*G5	L501	B3	R106	*C2	R195	*C2	R292	*E2	R390	*F2	R488	*G2		
C191	D2	C319	F3	C448	*G3	D405	*H5	L502	A3	R107	*C2	R196	C2	R293	*D2	R391	*F2	R489	*G2		
C192	*D2	C320	*F3	C481	H2	D406	*H5	L503	B4	R108	*C2	R197	C2	R294	E2	R392	*F2	R490	*G2		
C193	D2	C321	F3	C482	*G2			L504	A4	R109	*C2	R198	D2	R295	*E2	R393	*F2	R491	*G2		
C194	D2	C322	*F3	C483	*G2	IC101	*C2			R110	*C2	R201	D2	R296	E2	R394	F2	R492	*H2		
C195	D2	C323	F3	C484	G2	IC102	*C3	Q101	*C3	R111	*C3	R202	*D2	R297	E2	R395	*F2	R493	*G2		
C196	*C2	C324	F4	C485	G2	IC103	*D4	Q102	*C5	R112	*C2	R203	*D2	R298	E2	R396	F2	R494	H2		
C197	D2	C325	*F3	C486	H3	IC104	*C3	Q103	*C5	R113	*C3	R204	*D2	R301	F2	R397	F2	R495	*H2		
C198	*D2	C326	F3	C487	H2	IC105	*C3	Q104	*C5	R114	*C3	R205	*D2	R302	*F2	R398	G2	R496	H2		
C201	D2	C327	F3	C488	H2	IC106	D3	Q105	*C5	R115	*C3	R206	*D2	R303	*F2	R401	G2	R497	H2		
C202	*D2	C328	F5	C489	H2	IC107	C3	Q106	*D5	R116	*C6	R207	*D2	R304	*F2	R402	*G2	R498	H2		
C203	D2	C329	*F5	C490	H2	IC108	*D4	Q107	*C5	R117	*C5	R207	*E2	R305	*F2	R403	*G2	R501	*B4		
C204	*D2	C330	F5	C491	H2	IC109	*D4	Q108	C4	R118	*C5	R208	*E2	R306	*F2	R404	*G2	R502	*A3		
C205	D2	C331	G5	C492	*H2	IC110	D3	Q109	*C5	R119	*C5	R209	*E2	R307	*F2	R405	*G2	R503	*A3		
C206	*D2	C332	G4	C493	H2	IC181	*C3	Q110	*D5	R120	*C6	R210	*E2	R308	*F2	R406	*G2	R504	*A3		
C207	E2	C333	*G4	C494	H2	IC182	*C2	Q111	*D4	R121	*C5	R211	*D3	R309	*F2	R407	*G2	R505	*A3		
C208	*D3	C334	G5	C495	H2	IC201	*D2	Q112	*D4	R122	*C5	R212	*E2	R310	*F2	R408	*G2	R506	*B3		
C209	*D3	C335	*F5	C496	*H2	IC202	*E3	Q113	*D5	R123	*C5	R213	*D3	R311	*F3	R409	*G2	R507	*B3		
C210	D3	C336	*F3	C497	H2	IC203	*E4	Q114	*C3	R124	*C6	R214	*D3	R312	*F2	R410	*G2	R508	*B3		
C211	*D6	C337	F4	C498	*H2	IC204	*E3	Q115	D4	R125	*C5	R215	*D3	R313	*F3	R411	*G3	R509	*B4		
C212	*D5	C338	*G4	C501	*A3	IC205	*E3	Q116	D4	R126	*C5	R216	*D6	R314	*F3	R412	*H2	R510	*B3		
C213	*D6	C339	*F4	C502	B4	IC206	E3	Q181	*C2	R127	*C5	R217	*D5	R315	*F3	R413	*G3	R511	*B4		
C214	*D5	C340	G3	C503	*A4	IC207	E3	Q182	*C2	R128	*C3	R218	*D5	R316	*F6	R414	*G3	R512	*B4		
C215	*D6	C341	F3	C504	*A4	IC208	*E4	Q201	*D3	R129	*C3	R219	*D5	R317	*F5	R415	*G3	R513	*B5		
C216	*D5	C343	*F3	C505	*B3	IC209	*E4	Q202	*D5	R130	*C3	R220	*D6	R318	*F5	R416	*G6	R514	*B5		
C217	*D4	C345	*F2	C506	*A3	IC210	E3	Q203	*D5	R131	*C3	R221	*D5	R319	*F5	R417	*G5	R515	*B5		
C218	E4	C347	F3	C507	A3	IC281	*E3	Q204	*D5	R132	*C3	R222	*D5	R320	*F6	R418	*G5	R516	*B5		
C219	D3	C348	*F3	C508	*B3	IC282	*E2	Q205	*E5	R133	*C3	R223	*D5	R321	*F5	R419	*G5	R517	*B4		
C220	*D3	C381	F2	C509	B3	IC301	*F2	Q206	*E5	R134	*C3	R224	*D6	R322	*F5	R420	*G6	R518	*A5		
C221	D3	C382	*F2	C510	*B3	IC302	*F3	Q207	*E5	R135	*C3	R225	*D5	R323	*F5	R421	*G5	R519	*A5		
C222	*D3	C383	*F2	C511	*B3	IC303	*G4	Q208	D4	R136	*C3	R226	*D5	R324	*F6	R422	*G5	R520	*B5		
C223	D3	C384	F2	C512	*B4	IC304	*F3	Q209	*E5	R137	*C5	R227	*D5	R325	*F5	R423	*G5	R521	*B5		
C224	D4	C385	F2	C513	B5	IC305	*F3	Q210	*E5	R138	*C5	R228	*D3	R326	*F5	R424	*G6	R522	*A4		

Board layouts : Next page



Location list : Previous page

PS-616 -A SIDE-
SUFFIX: -11

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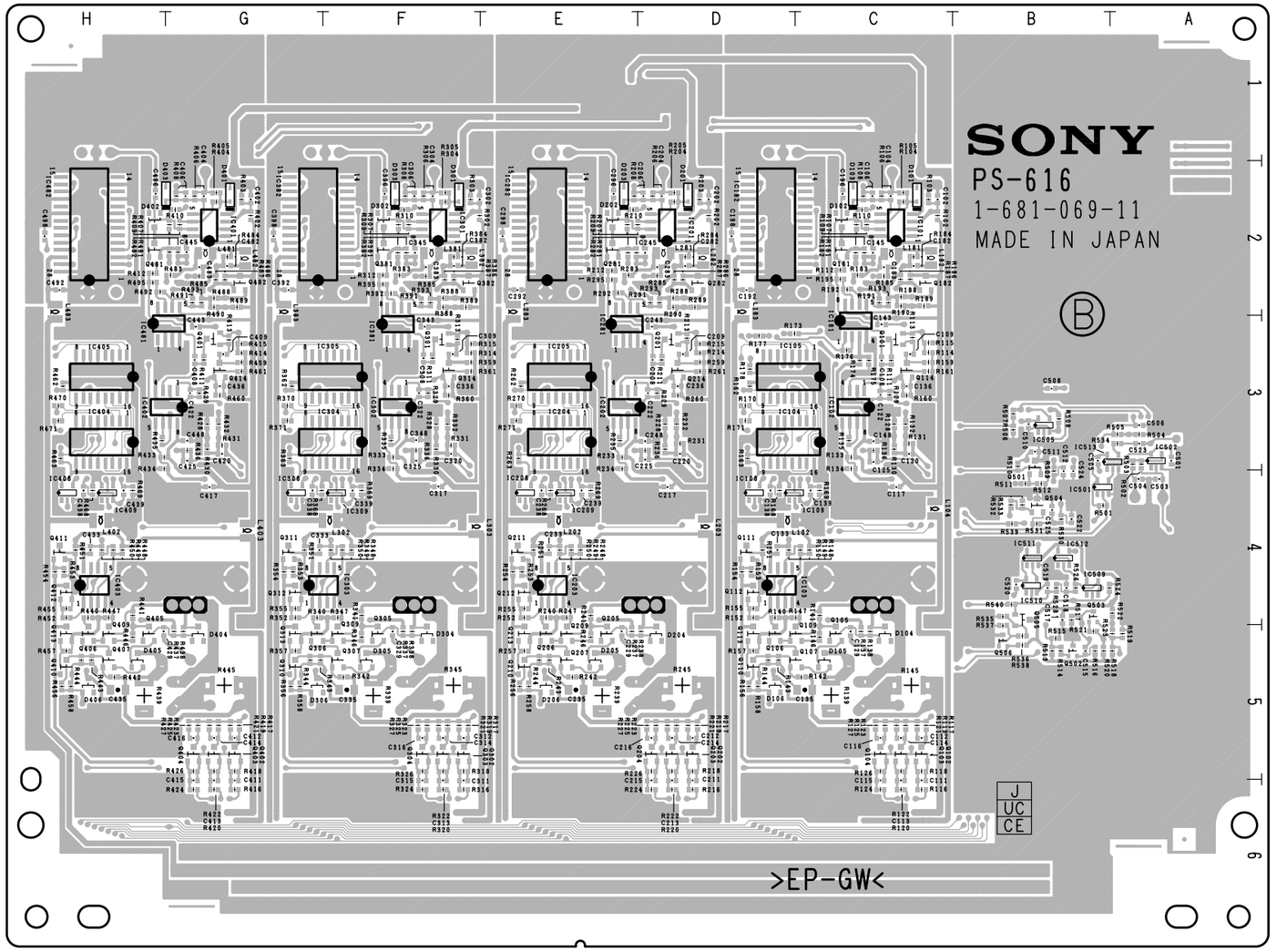

PS-616 -B SIDE-
SUFFIX: -11

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer :

Check the metal trim, “metallized” knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA. Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers’ instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The “limit” indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

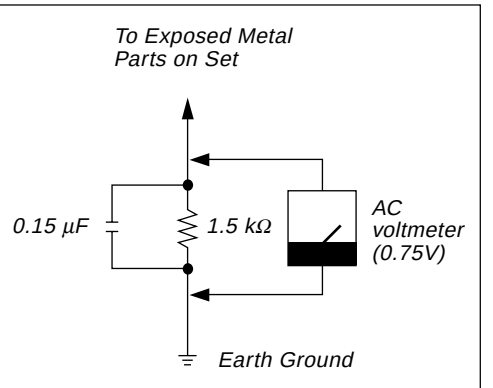

Fig A. Using an AC voltmeter to check AC leakage.

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YS-W270P (CE) E
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